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Textile World

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Editor: Douglas G. Woolf

Why the Wool Institute Failed

THE "I told you so's" are in the saddle in the wool industry today. Those who "never did believe in this cooperative bunk anyhow" cite the death of the Wool Institute as vindication of their stand.

Even those who supported the movement to some extent, join in the funeral dirge by isolating specific causes which led to its collapse. . . . . The institute tried to cover too much ground. . . . . It bothered too much with fundamentals . . . . . It got in wrong with the Government. . . . . It failed to receive the support of certain large factors.

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No one of these citations, nor the combination of all of them, explains the failure of the Wool Institute.

It failed because at no time in its existence did it represent an undertaking of any considerable part of the woolen and worsted industry.

Certain leaders have been conspicuous for their fearless and untiring efforts in behalf of the institute and its activities. Others, less firm in their conviction but anxious to support any apparently worthwhile movement, have tried to play the game. But the rank and file of the industry, both members and non-members of the institute, regarded it as something quite apart from their own businesses. Even if they did not scoff, they did not work.

Compare this attitude with that which prompted the formation and development of the Cotton-Textile Institute. Never, in our entire textile experience, have we witnessed another demonstration of enthusiasm comparable with that displayed at the memorable meeting in Atlanta in May, 1926 — and at the subsequent meetings which crystallized into definite action.

Nor has that spirit evaporated. There have been lulls in interest, of course. There has been criticism, and harsh criticism, both mumbled in private and shouted in public. But to the majority of cotton manufacturers, the institute is still their own enterprise; its success or failure is still tied up, in their minds, with the progress of their own businesses. We constantly marvel at the time and energy which men in the cotton industry—not one or two, but scores—are devoting to institute affairs.

The cotton group has had excellent executive leadership, it is true. It has had a good income to expend on organization work. However, neither of these would have produced results, if the industry itself had not been back of the institute. Similarly, a cooperative movement in wool manufacture will not succeed until that type of support is forthcoming.

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Judging from the lethargy extant today, we state regretfully that early achievement of such an attitude is unlikely. Possibly a year, possibly two years, possibly more, will be required.

Meanwhile the experience of the last few years has not been wasted. Men who never before thought in terms of cooperative effort have had primer training in it. More and more will come to realize that the very condition they cite as the reason why such activity is hopeless in wool manufacture, namely the intense individualism of its members, is in itself the primary reason why constructive coordination is absolutely necessary, and inevitable, in that industry.

Its leaders have grounds for disappointment. They have no grounds for despair.

The Week in Textiles

as Reflected in This Issue

General

Fitting Bobbins

Bobbin dimensions most favorable to satisfactory spindle performance have been studied with great care, and as a result definite recommendations are now offered. *(page 37)*

Diameter of Fibers

Good results have been obtained from the improved eriometer developed by the U. S. Bureau of Standards for measuring fiber diameters. It is expected that it will find application in the grading of wool. *(page 50)*

Adjustable Oil-Feed

An oiler of the wick type for lubricating bearings requiring different amounts of oil is described. *(page 50)*

Pita Fiber

Marketing of fabrics made from the pita has increased interest in this fiber, secured from leaves of a variety of wild pineapple. *(page 68)*

Cotton

Breeding Cotton

Most effort in past has been to breed varieties of cotton which suit the farmer and there is room for more attention to needs of spinner. Cooperation between grower and spinner would benefit both. *(page 33)*

Belt Shifter

Announcement is made of a new, positive-acting cone-belt shifter. It is claimed that unevenness of rovings due to lag in belt shifting is entirely eliminated by the use of this device. *(page 50)*

Cotton Supply Enormous

Problem of cotton textile industry is to adjust itself to the enormous supply of cotton, according to Dr. L. H. Haney writing in this week's TEXTILE WORLD Analyst. Prices will stabilize when increased supply is discounted, he states, and money can be made by manufacturing cheap cotton as well as when prices are high. *(page 53)*

Goods Reflect Drop

Print cloths reflected the drop in cotton levels, and several numbers were nearly a cent below last week. Demand is light but merchants are still shipping on orders placed in June. *(page 57)*

Cotton Slumps

Raw cotton slid down to new lows for the season on receipt of favorable weather news. Prices then steadied awaiting government estimate, issued Aug. 8. *(page 57)*

Cotton for Germany?

Proposal that Farm Board cotton be sold to Germany on long term credit meets with varied response from economists and those in the textile industry. *(page 69)*

Wool

Plain Weave Acts as Brake

Long warp and filling floats, made necessary by the application of figured effects to women's coating and dress fabrics, are the cause of excessive shrinkage during the finishing operations. The type of ground weave used for such fabrics controls, to a large extent, the amount of actual shrinkage which takes place. It has been determined that the plain weave has a particularly beneficial effect in this respect. *(page 24)*

Weaving with Binder Warp

The method of rigging up a loose binder warp for weaving mohair plush is discussed. A simple method of regulating tension is presented. *(page 39)*

Wool Demand Broadens

Demand for raw wool has broadened to include the medium grades with prices in this group showing some advances. *(page 59)*

Worsted Yarns Slow

Action of several spinners in raising asking prices to a point more nearly in line with raw wool has discouraged buying for the time being and few sales of any account are being made. *(page 59)*

Wool Reworks Priced Low

Prospects for wool reworks and rags are brightening. Very low price level leads to belief that materials will be used to greater extent to produce low-priced fabrics. *(page 61)*

New Lines May Stress Fancy Fabrics

Some woolen and worsted factors believe there will be a good though limited call for novelties for spring, and these fabrics are expected to attract attention at the spring openings. *(page 63)*

Knitting

Rise of Jantzen

Aggressive merchandising is held to be the prime factor in the remarkable record of the Jantzen Knitting Mills. Products receive world-wide distribution. Development since humble beginnings 21 years ago is traced and progressive steps taken in expansion are outlined. *(page 28)*

The Textile Outlook

IT is becoming increasingly evident that the textile industry as one of the so-called consumer industries, is enjoying, on the whole, a rate of dema nd better than that prevailing in business in general. Such a development is natural; textiles, shoes and other consumer goods, usually experience a rebound after a depression, well in advance of other products. Nor is it felt that the latent demand for textiles for needed replacement has really been tapped thus far. Naturally, the extent to which business will be maintained, and increased, depends very largely upon improvement in general business. . . . No new trend of any importance was noted in the textile markets this week. Cottons are quiet, with general tone firm; mills are busy shipping orders placed in June. Worsted suitings continue active and mills are sold ahead; overcoatings move steadily, the call being chiefly for staples. There is an active call for heavyweight underwear. Raw silk is developing strength, despite the hesitant demand and the strike. Rayon call is reported abnormally heavy.

Circular-Hosiery Stitch

The highest degree of elasticity is desirable at the ankles of circular-knit hosiery. Factors involved in stitch-setting are discussed, and it is pointed out that a carefully kept record of the settings for various hose is advantageous. *(page 32)*

Full-Fashioned Movements

The concurrent movements of needles, knock-over bits, and sinkers in the knitting of full-fashioned hosiery are described in minute detail. Diagrams drawn accurately to scale make the ingenious mechanism which accomplishes the loop-forming operations more understandable. *(page 34)*

Wrinkle Marks in Hosiery

Causes of wrinkle marks are discussed and corrective treatments are recommended. A good formula for boiling off is presented. *(page 39)*

Uneven Shade in Hosiery

That the dyer cannot always be blamed for uneven shades in finished hose is made clear in two articles on the subject. Such a defect may arise from several widely separated sources. *(page 41)*

1932 Swimsuit Styles

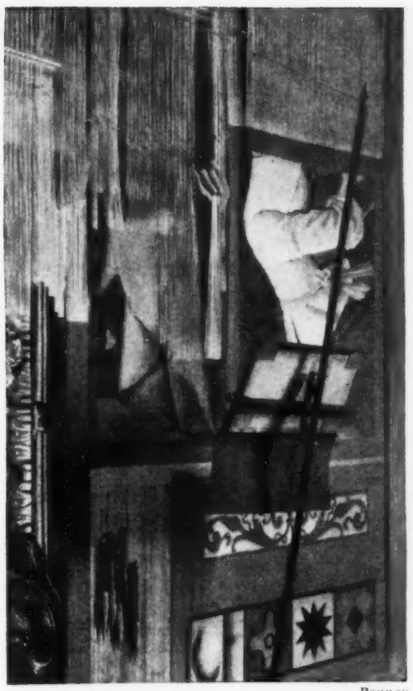
Bathing-suit styles for 1932 are occupying the attention of knitters, and early reports indicate that the "suspender" bathing-suit for men which made its first appearance this year will be an important line next season. Pastels will be featured in women's suits. *(page 64)*

Underwear Stocks Low

Inquiry in the New York market indicates that underwear stocks, all weights, are exceptionally low. Some agents say they are the lowest on record. Call for winter weights is active. *(page 64)*

Mesh Hosiery for Winter

Knitters of high-priced mesh hosiery lines are promoting these numbers for winter wear with formal apparel, and are increasing output, anticipating good demand. *(page 64)*



Bonney

Worker in Gobelin tapestry factory in Paris separates warp threads of her loom to inspect her progress reflected in the mirror. These tapestries are worked from the wrong side on upright looms

Silk

Filling Breakage

Excessive filling breakage may be due to one or more of several reasons, all of which are outlined herewith. Preventive measures are explained in detail. *(page 39)*

Raw Silk Stronger

Paradoxically enough, considering the silk strike, the primary market is stronger, and buying is fairly active, though limited to nearby needs; yellow 20/22s are short. *(page 61)*

Yarn Men Saw Wood

Silk yarn demand is at a low ebb, and neither throwsters nor spinners are doing enough business to cover overhead. Both markets are confident and look for early pick-up. *(page 61)*

Foresee Fabric Shortage

Curtailment of output due to the strike and backward production by the industry as a whole is believed by some to be making for a broadsilk shortage next month. Cantons already are scarce, and distributors have difficulty in getting transparent velvets. *(page 61)*

Rayon

Warp Streaks in Crepe

Uneven tension is often the cause of warp streaks which show up in rayon fabrics. Unfortunately it is impossible to remove these streaks and the only corrective treatment is to take the necessary precautions in warp preparation. *(page 40)*

German Rayon Quota

Proposed rayon yarn marketing convention in Germany may have far reaching effect upon European rayon situation. *(page 42)*

July Sales Set Record

Rayon producers are the most active group in textiles at present, with a phenomenal July volume, and August sales already close to plant capacity for the month. All of which strengthens the chance of fall yarn shortage. *(page 61)*

Processing

Screen Printing

Information supplementing that presented in a previous issue describes the general procedure to be followed in printing by the silk screen method. *(page 27)*

Dyeing Felt Hats

Methods of obtaining the proper amount of penetration in dyeing hat felts are suggested. The damaging effect of using an open steampipe in dyeing is stressed. *(page 40)*

Du Pont Adds to Holdings

Du Pont has entered into an agreement to purchase the dyestuffs and chemical business of the Newport Co. subject to the approval of stockholders of the latter concern. *(page 42)*

Prints, Old and New

Pictorial comparison is made of 18th and early 19th century prints with modern designs. *(page 43)*

Strike Spreads to Dyers

Possibilities of silk strike in Paterson spreading to dyers increased this week as operatives of Colt, N. J., plant of Associated Dyeing and Printing Corp. walk out. District does 80% of silk finishing in country. Negotiations pending. *(page 68)*

The Business Outlook

WARNINGS reports for the second quarter are not discouraging. European difficulties seem less menacing. These are the two cheerful things to be said of the most sluggish week of a sluggish summer. The pulse of August, always listless, drops to a new low rhythm, as recorded by our index. Cotton, wheat, and copper prices move slowly downward in lackadaisical trading. Security markets were unexciting. Declines in car loadings and bank debits also reflect the summer inertia. Though currency circulation has contracted somewhat, the level remains excessively high. The public is hoarding cash. The promising expansion of bank loans has been stunted. In spite of ample reserves, credit expansion is restricted that liquidity may remain high. The result, to American investors, is the same. Meanwhile Washington begins relief preparations for a gloomy winter ahead and a state government resorts to martial law to raise the price of oil.—*The Business Week*.

Plain-Weave Ground for Small Figures in Woolens Reduces Contraction

By Alexander Yewdall

◆ *Fashion being a dictating factor in women's wear, it is often necessary to construct fabrics which, from a practical standpoint, are inferior to others having less style but better finishing qualities. Excessive shrinkage in figured woolens is a typical example of the trouble experienced in conforming to fashion.*

THE present-day fashion in women's coating and costume styles, which demands loosely constructed fabrics with more or less bold weave patterns, is the cause of considerable trouble in finishing and garment-making plants. The nature of the weave, which contains long warp and filling floats, is such that excessive contraction in width is very likely to occur.

In fabric designing many of these troubles could be prevented or appreciably reduced by the use of a suitable foundation upon which to build up the long floats required for the weave style. In this respect the plain weave affords the most satisfactory ground for producing small figured effects formed by long floats of warp or filling or both.

Basic Weave Affects Contraction

It is well known, of course, that fabrics composed of short-float weaves do not contract to the same extent as those made with weaves containing longer floats. The reason for this is that the more frequent and intimate interlacing of the thread units in the former fabrics resists to a greater extent both the contraction power of the twist contained in the yarns and the natural felting property of the wool. The plain weave, therefore, when used as a foundation upon which the long figure floats are arranged, acts as a brake and thus serves to check undue contraction which would otherwise occur.

Figs. 1 to 10 are a series of simple designs composed of small figured effects built up on plain-weave grounds, and Patterns *A* to *J* are photographic reproductions of ladies' coating patterns produced from them, the manufacturing particulars being as follows: 15 skeins (2,4 run) fine Cheviot-quality woolen yarns, set 13s reed 2s in a 75-in. reed, and woven with 26 picks per inch; warp coloring, white; filling, mid blue.

Each design was made on sixteen threads and picks, not only to show that a considerable variety of patterns can be obtained on a small number of thread units, but also for the purpose of comparing the contraction or shrinking property of each construction when made to a uniform size.

Four Thread Spots

Fig. 1 (Pattern *A*) consists of a small four-thread spot composed of five floats placed in the center of the sixteen threads of plain weave. The spot is emphasized by the white warp and stands out well from the blue and white intermingled ground upon which it is placed, giving a bright appearance to the fabric.

Fig. 2 (Pattern *B*) is an example of a "drop-figure" effect, being composed of two four-thread spots—the same size as in Fig. 1 but set in opposite corners of the square or plain weave. These two spots, which occupy the same ground space as in Fig. 1—i.e., sixteen threads and picks—enhance the appearance of the fabric, which appears considerably brighter.

In Figs. 3 and 4 (Patterns *C* and *D*) the spots are arranged in the same order as in the previous example; but in Fig. 3 one spot is formed by warp and the other by filling, while in Fig. 4 both are formed by the filling. The result on the fabric in each case is a diminishing of

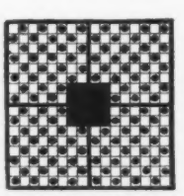


Fig. 1

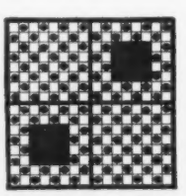


Fig. 2

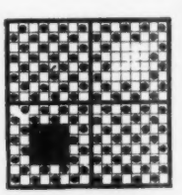


Fig. 3

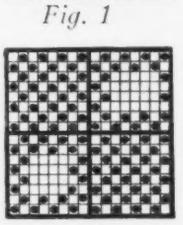


Fig. 4

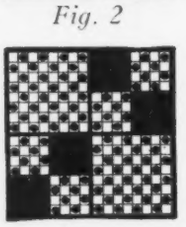


Fig. 5

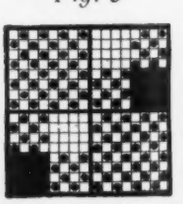


Fig. 6

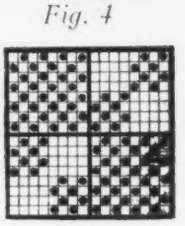


Fig. 7

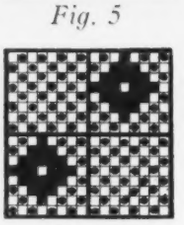


Fig. 8

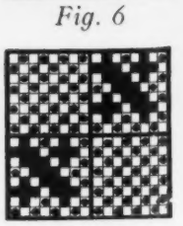


Fig. 9

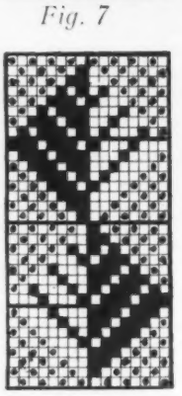


Fig. 11

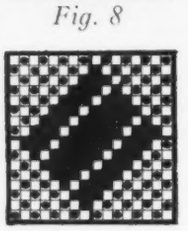


Fig. 10

COLOR DESIGNS

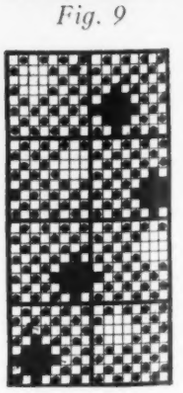
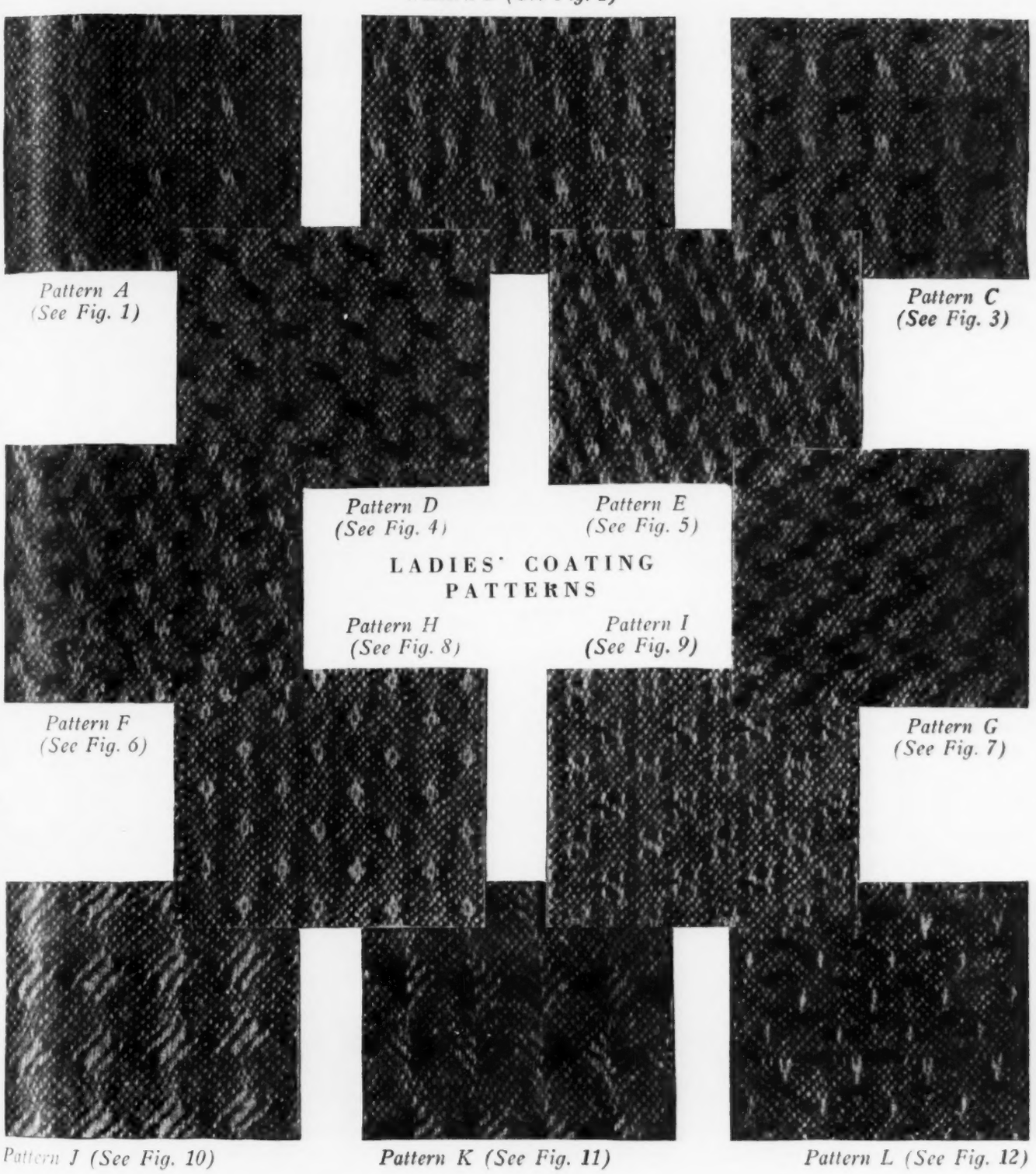


Fig. 12


Pattern B (See Fig. 2)
Pattern A (See Fig. 1)
Pattern C (See Fig. 3)
Pattern D (See Fig. 4)
Pattern E (See Fig. 5)
LADIES' COATING PATTERNS
Pattern H (See Fig. 8)
Pattern I (See Fig. 9)
Pattern F (See Fig. 6)
Pattern G (See Fig. 7)
Pattern J (See Fig. 10)
Pattern K (See Fig. 11)
Pattern L (See Fig. 12)

brightness, due to bringing the mid shade to the surface at the expense of the white warp.

In Figs. 5, 6, and 7 (Patterns *E*, *F*, and *G*) the spots are increased to four and arranged in broken-crow order, the general scheme, however, being the same as in the three previous examples. Thus, in Fig. 5 the spots are formed by warp, in Fig. 6 they are formed by warp and filling alternately, and in Fig. 7 they consist of filling only. Paterns *E*, *F*, and *G*, compared with the three former ones, afford an interesting comparison in luminosity, inasmuch as they are considerably more sparkling in appearance and brighter in hue. These qualities are due to the additional spots and the consequent increase in the number of long floats, which provide a better surface for the reflection of light, thereby enhancing the color values.

Fig. 8 (Pattern *H*) is composed of two small diamond-shaped figures formed by the warp and arranged in "drop" order on the plain ground as in Fig. 2. It will be noticed that the diamonds contrast with the ground weave and thus stand out better than the square spots of Fig. 2. The pattern, however, does not yield such a bright-looking fabric as Pattern *B* because the floats vary in size and do not, therefore, present such an even surface to the light.

Fig. 9 (Pattern *I*) consists of two fancy-shaped fig-

ures also arranged in "drop" order and contrasting with the ground weave as in the previous design. There is also a reduction in brightness when compared with the last pattern, owing to the small size of the warp floats which form the figures.

A large diamond, formed by three series of warp floats running in twill order, fills nearly half the total space occupied by the design in Fig. 10 (Pattern *J*), so that the plain ground itself also appears in diamond formation. The two plain threads, however, the first and last in the design, by outlining the diamond, give a slight stripe effect to the pattern.

Figs. 11 and 12 (Patterns *K* and *L*) are two larger designs, each being worked out on 16 threads and 32 picks. The former consists of a double diamond figure with each diamond split vertically down the center, one side being developed in warp and the other in filling floats arranged in twill order. In the lower diamond the floats of warp and filling are reversed in position. The latter (Fig. 12) is composed of two series of small diamond-shaped spots each arranged in extended broken-crow order, one developed in warp and the other in filling floats. The diamond effects do not show in the woven patterns owing to the small floats used in their construction; they simply appear as small irregular-shaped spots. Also, as Patterns *K* and *L* were woven with a slightly darker shade of blue filling, the ground appears rather duller and the patterns are somewhat lacking in brightness when compared with the preceding examples.

Effect of Pattern Figures

An examination of the structure of the first ten designs (Figs. 1 to 10), and a comparison of their length and width shrinkages given in the accompanying table, show how contraction is affected by the size, character, and number of the figures or spots in the different designs. It will be realized that throughout the series the degree of contraction increases as the amount of plain-weave ground is diminished by increasing the size and number of the figures.

The length shrinkages show contractions taken from 1 yd. of warp measured in the loom during weaving, and the width shrinkages show contractions from the reed width of 75 in. The percentage shrinkages are calculated from these two units.

LENGTH AND WIDTH SHRINKAGES AFTER FINISHING

Fig. No.	Length In.	Width In.	Length %	Width %
1	28¼	60½	21.5	19.3
2	28	58½	22.2	22.0
3	27½	58	23.6	22.6
4	27¾	58¼	22.9	22.3
5	27	54¾	25.0	27.0
6	26½	53	26.3	29.3
7	26¼	54¼	27.0	27.6
8	27	59¾	25.0	20.3
9	26	58½	26.3	22.0
10	25	58¾	30.5	21.6

The single-spot design (Fig. 1) contains twelve unbroken or continuous plain-weave threads; the two-spot designs (Figs. 2, 3, and 4) contain only eight unbroken plain ends, the general result of this difference in construction being seen in the greater amount of contraction in both length and width of this series. Figs. 8 and 9, also two-spot designs, may be compared with them: both have six unbroken threads and picks, but the warp floats comprising the spots are generally smaller in size—hence the tendency to resist contraction. The length contractions, however, are greater, owing to the actually larger number of warp floats contained in each design.

Figs. 5, 6, and 7 are four-spot designs, in which there are no continuous plain threads or picks—hence the much greater shrinkages when compared with the two-spot designs, Figs. 2, 3, and 4. It will be noticed that these are the only patterns of the whole series in which the percentage shrinkages are greater in the filling than in the warp. This may be attributed, possibly, to the grouping of the spots in pairs, and also to the manner in which the groups oppose each other.

The large diamond pattern (Fig. 10) contains only four unbroken plain threads and picks; but the single filling floats separating the long warp floats, which form the diamond, assist in keeping out the width, so that, actually, it is the second widest pattern of the series. In length, however, it has contracted to the greatest degree owing to the long warp floats, which, as stated before, impel shrinking in that direction.

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THE ROMANS WORE WOOLEN SOCKS

These stockings and shoes were unearthed in the ruins of the little Roman City of Antinoe, on the river Nile, by an expedition from Harvard University. It has been determined that the stockings, which were so designed as to separate the great toe from the others, were made of a good grade of wool and were very finely dyed. This photo was supplied through the courtesy of Chas. T. Cahill, of the United Shoe Machinery Co. The entire collection is on display at this company's unusual museum in its Boston office.

Screen Printing *Aids Production of Intricate Patterns*

By Joseph Pignone

Technical Director, J. J. Berliner & Staff

Floral pattern for dress goods

◆ *Publication in our issue for May 9 of an article outlining the newer developments in screen printing has resulted in a number of inquiries for further details of the equipment and procedure used in this process. It is believed, therefore, that the accompanying article which describes the construction of printing screens and the application of the dyestuffs will be of interest to many of our readers who are not familiar with this method of printing.*

PRINTING of individual patterns on chintzes, silk scarfs, dress materials, and other highly seasonal goods requiring quick preparation and prompt delivery was formerly executed with wood blocks. While the results achieved with this method were of undoubted artistic value, the process involved an unusual caliber of workmanship, both in the preparation of the blocks, and in the actual printing. Screen printing, on the other hand, yields comparable results and permits a greater production.

Screens entail comparatively little effort in their construction, and require only ordinary skill in their manipulation. The screen consists of a wooden frame over which bolting cloth is tightly and evenly stretched. These frames are constructed in various sizes and proportions, the larger of which frequently measure 60 x 50 in. One significant advantage of the screen over the wood block lies in the practicability of these larger sizes. Wood blocks were very rarely cut over 13 x 20 in. because of their great weight. The time and labor saved in applying screens of large area in preference to small heavy blocks, is one of the factors which tended to diminish the usage of blocks. The bolting cloth most generally used is of high-grade silk having from 100 to 200 meshes to the inch. With this screen, intricate and well-defined patterns may be produced which would be decidedly impractical to handle with wood blocks.

The design or pattern is first completely drawn on a sheet of paper; and the outline of all the parts to be printed in the same color is traced on the silk surface of one frame. A different frame is so outlined for each different color. Next, those areas of the screens not involving the passage of color dye, are stopped or filled in with an insoluble filler, such as shellac or enamel. When the dyes are placed in the frames and pushed across the surface with a squeegee, they penetrate the screens only through the areas unprotected by filler.

The dyes used vary with the materials to be printed. Some fabrics will absorb the dye readily, while others must be allowed to dry before the application of another color. Chrome, acid, basic, and vat color are a few of the types used. The pastes are prepared in the usual manner, care being taken that the fluidity is suitable.

The printing tables range in length from a few yards up to 60 to 70 yd., which is approximately the length of a piece of goods. These tables are padded with felt under a covering of specially treated cloth, and are lined on one side with a gage rail. This rail is simply a fixed angle iron fitted with movable stops to regulate the spacing of the frames and insure proper registration. The fabric to be printed is sometimes glued to the table; or it is fastened on one end of the table, tightened by a winch from the other, and its sides pinned to the cloth table covering.

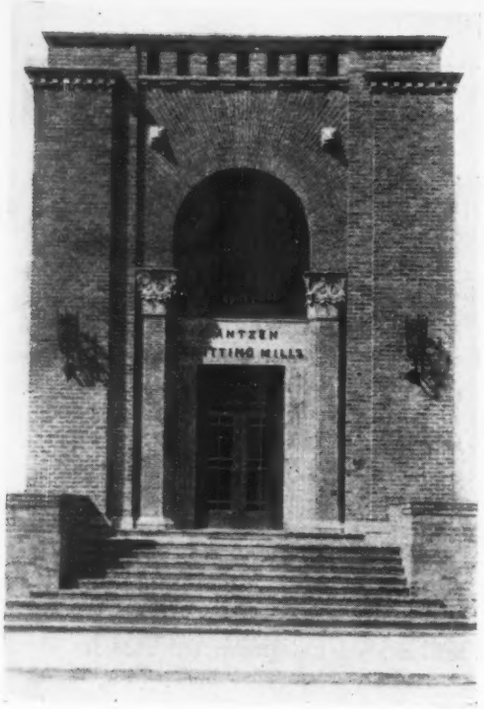
Both direct printing and discharge work may be obtained by the screen process. There are several methods employed in drying the material between each application of color, the most common of which is by the use of ordinary electric fans. The most modern and effective method, however, is the application of hot-air systems to this purpose. A perforated pipe or duct is run along the printing table opposite the gage rail, from which a blast of hot air blows across the freshly printed material. It is rarely, if ever, necessary for the printer to wait between color applications.

After printing with vat colors the fabric is rolled and placed in a live steam chest to fix the color in the material. This fixing, or aging, is a chemical reaction, and conditions in the steam box must be precisely right. When steam is turned on, the air must be exhausted from the chest within 30 seconds to prevent oxygen from decomposing the hydro sulfite. When a temperature of about 212° F. is reached, the salt reacts with the dye and produces the desired shade.

Aging is followed by thoroughly washing in several baths to remove all excess of color and gum. Immersion in a hot soap solution brightens the colors and softens the texture of the goods. Drying is effected by looping the cloth over racks, beneath which are steam coils to heat and fans to circulate the air.

Plant of Jantzen Knitting Mills at Portland, Ore.

Astute Selling *is Secret of Jantzen's Meteoric Rise*



Main entrance, administration building

BATHING-SUIT producers have been favored sons of fortune in the textile industry during recent years. With all due allowance for keen competition, and depressed market conditions, this division of the knit goods trade has fared signally well; and swimsuit manufacturers, cheered by a satisfactory 1931 season, now are busy on their 1932 plans. The growing style importance of swimsuits and, in particular the vogue of sunback models, has given numerous companies a place in the sun. Easily the most extraordinary growth in the industry has been that of the Jantzen Knitting Mills, of Portland, Ore. Astute sales policies, and an aggressive development, first of the domestic market, and then of foreign outlets, has made this company a significant textile factor both at home and abroad. One secret of the success of the Jantzen Knitting Mills is merchandising; and the story of Jantzen's development has a moral for manufacturers of all other types of textiles.

This company has grown from a shoe-string unit, to a giant international corporation in the brief span of twenty years. The firm had its genesis in a small storeroom 18x50 ft. at 231 Adler St., Portland, in 1910; today the main Portland mills occupy 119,000 ft., and this is but the nucleus of other mills throughout the world. The closing years of the last decade saw perhaps the greatest development in the company's affairs.

In 1927 the Jantzen Knitting Mills purchased its first extensive realty—that on Sandy Boulevard, Portland, consisting of two city blocks; later two other blocks were added to its initial holdings.

The year which followed, found the company making its entry into the foreign markets, under the trade name of Jantzen (Australia) Ltd., with headquarters at Sydney. The Sydney Mills, with a capacity of 15,000 doz. swimming suits annually, supplies both the Australian and the New Zealand markets.

By 1929, the present Portland plant had been completed, with floor space totaling 119,000 sq.ft., and a ground area close by of 74,000 sq.ft., for future building purposes. The group of buildings comprise the executive offices, factory building, warehouse, and that used for stores, and supplies.

Following the successful Australian venture, the firm entered the Canadian field, as the Jantzen Knitting Mills

of Canada, Ltd., and became a licensed manufacturer in Canada. The same year brought another expansion, this time at the production end. The company purchased the B. F. Boyer Knitting Mills, of Camden, N. J., reorganizing this unit, under the name of Jantzen Spinning Mills; a subsidiary of their Portland office. The Camden unit has a capacity of 1,250,000 lb. of yarn annually.

Subsequent to this purchase Jantzen turned to England. Building operations commenced on a new unit to be known as the Jantzen Knitting Mills, Ltd. (incorporated under the laws of Great Britain). This plant has been erected in the manufacturing town of Brentford, County of Middlesex, one of England's important manufacturing centers, and a suburb of London. By Nov. 1, 1930, the plant was completed: machinery installed; and production for the English market under way.

At the Portland, Ore., mill, which is the parent of all the branches, knitting machines operate day and night during the season. Here are assembled sixteen departments where Jantzen swimming suits are manufactured; and where every operation on these garments is supervised, from the winding of the raw yarn to the final inspection, and labeling of the finished garment. The raw yarn is brought to the Portland factory, from the Camden Spinning mill.

At the Portland mills, 500 doz. swimming suits are turned every 24 hours. From the time it enters the knitting room as raw yarn, to its appearance as a finished garment, 40 minutes actual working time, is required to produce each unit.

Such is the picture of Jantzen's position in the textile field today. Behind this lies the story of the start, in 1910, with only two hand-power machines, and a staff of two operators. During the season of 1910, the gross sales of the company amounted to only a few hundred dollars, with the founders John A. Zehntbauer, and Carl C. Jantzen, comprising its entire sales force. Today, 50 salesmen sell Jantzen swimming suits to 10,000 merchants throughout the United States, with 61 representative handling their goods abroad.

Up to, and including 1920, Jantzen distribution was restricted to the eleven western states. Today, suits are sold in every state east of the Rockies, while foreign shipments are made to Central, and South America, the South Sea Islands; all countries in Continental Europe, Asia, the Scandinavian countries, South Africa, India, Australia, New Zealand and many other points.

The Jantzen Knitting Mills were incorporated in January, 1910, with John A. Zehntbauer, president, Charles R. Zehntbauer, vice-president, and Carl C. Jantzen, secretary-treasurer. That year, the newly organized company bought out the interests of the Luke Knitting Mills, and moved into a storeroom, at 231 Alder St.

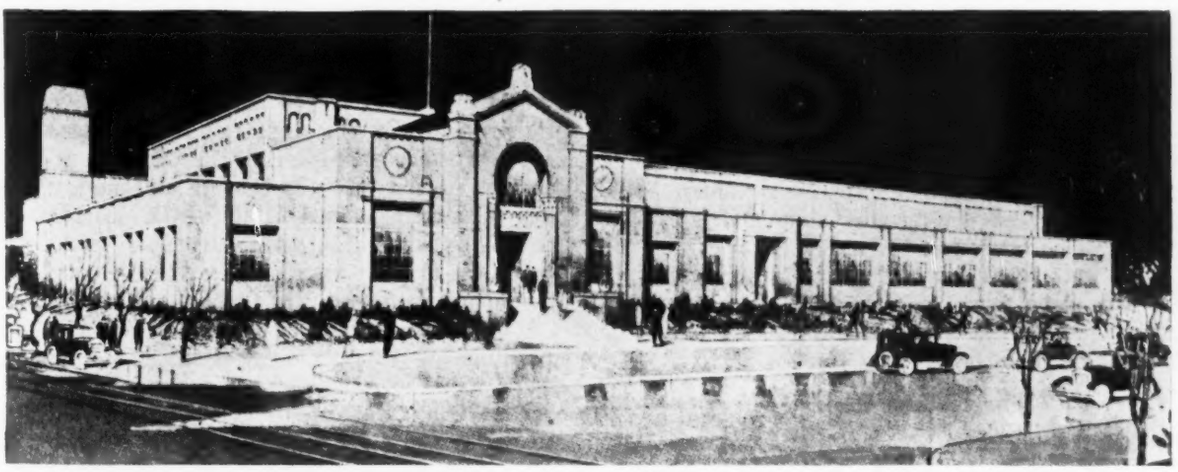
Shortly after, stock, to the amount of $10,000, was issued through the secretary, Carl C. Jantzen. In order to buy his stock, Carl C. Jantzen, at that time an apple grower in the Hood River valley, sold out his apple orchard; staking the entire proceeds from its sale on the new venture.

At first, there were lean days, when each of the partners drew as his share, $75 per month, which barely carried their families through, from month to month. Success was not far off, however. Within four years from its humble beginning on Alder St. the Jantzen Knitting Mills had forged ahead until, in 1914 the season's sales amounted to $66,665, while the operating force had been trebled.

The famous Jantzen diving girl

In 1915 they purchased the interests of the Nolan Knitting Mills, manufacturers of sweaters, which line they added to their own, at the same time taking a lease upon a building site at E. 44th and Stark Sts., Portland, Ore. Later, however, they discontinued the manufacture of sweaters, specializing in swimming suits, only.

In 1920 came the Jantzen diving girl. This Jantzen bathing beauty first saw the light in the company's publicity department. For some time, she graced the pages of the catalogue put out by Jantzen Knitting Mills, before her discovery by the general public. Soon merchants throughout the country, handling the Jantzen product, were clamoring for posters with which to advertise these swimming suits. Stickers upon thousands of automobile windshields, carried the likeness of this diving nymph from the Pacific ocean, to the Atlantic. In Portland, for years past, no civic parade of any consequence was complete without a float featuring a bevy of Jantzen bathing girls. The rest of the promotional activities, including the Portland swimming pool, and the ceaseless drive to popularize the name Jantzen is well known; it has made the company brilliantly successful.



The plant of Jantzen Knitting Mills, Ltd., seven miles from the heart of London, England

Expediting Twist-Gear *Changes*

By L. L. Kingsford

◆ *The changing of twist gears should be a simple and quickly accomplished task and should not involve the application of a large amount of force. Poor adjustment of twist gears may be the cause of faulty work on spinning or roving frames. In this article the author has outlined the difficulties to be encountered in making twist-gear changes and has suggested several steps to overcome them.*

THE technique of the removal, adjustment, and changing of the twist gear on spinning and twisting frames is a most important one. It must be thoroughly mastered by the mill mechanic, section-hand, or fixer, if the gear is to function at maximum efficiency.

No gear, perhaps, is changed more frequently than the twist gear *T*, Figs. 1 and 2. Yet no gear, probably, is more abused. It seems to be an easy matter to remove a twist gear and replace it by another; and still one need only walk through a spinning or twisting department of fair size where changes of counts are frequent to find the mechanic or section-hand having considerable difficulty removing a gear.

In all such cases something is fundamentally wrong. The twist gear should come off quite easily, and it should go on just as readily. The trouble, likely enough, is that when the gear was previously put on it was a rather tight fit—perhaps even had to be hammered into place. This practice of forcing on the twist gear should never be tolerated. If the bore of the gear is too small, it should be reamed out with an expansion reamer. This reaming can be done in the machine shop if it is nearby; or the tool can be borrowed for a few minutes and the section-hand can ream out the gear himself. It will pay a mill to have a set of expansion reamers within easy access, and all fixers and section-hands should be taught to handle them properly.

Filing Undesirable

Fixers should never be allowed to file out the bore of a tight-fitting gear. Filing a hole is an art and cannot generally be acquired in the routine work of a fixer. The result usually is that the hole is filed out unevenly; and while the gear may not give any trouble on the particular stud to which it is then fastened, it might give rise to more or less trouble on other studs later on.

When a twist gear for some reason cannot be readily removed, it is well to know just what to do in order to get it off without causing damage. Some fixers in such a case will take a hammer and, after removing the nut *N* on the gear stud, Fig 1, will either bang on the back of the gear or on the end of the threaded stud. This is liable to have one of two damaging effects—either teeth will be broken from the gear or the stud threads will be damaged. If the stud does not move after a light tap or two, continued hammering will cause a spreading of the end of the stud so that the nut *N* cannot be replaced without the expanded threads being filed down. Such a course takes time and holds up production.

When Tightly Frozen

A better way is to loosen the nut *N*, back it off a bit, and then tap the nut itself with the hammer; no damage will then be done to the threads. If the stud does not yield to the first few quick, firm taps, a piece of wood can be placed across the front of the nut and a series of harder blows given. Sometimes a lead hammer can be used effectively, its heft enabling a considerable force to be exerted against the end of the stud and its softness preventing injury to the threads of the stud.

Sometimes, however, the gear is so firmly attached to the stud, or the latter so tightly frozen in the bearing *B*, that the stud moves only a trifle at each blow and finally its end comes flush with the end of the bearing. Further hammering of the type described is out of the question now; but a piece of soft wood that will fit into the end of the bearing, or a soft metal drift with a flat end that can be placed full against the stud end, may be effectively used without causing damage.

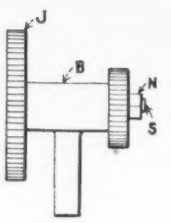


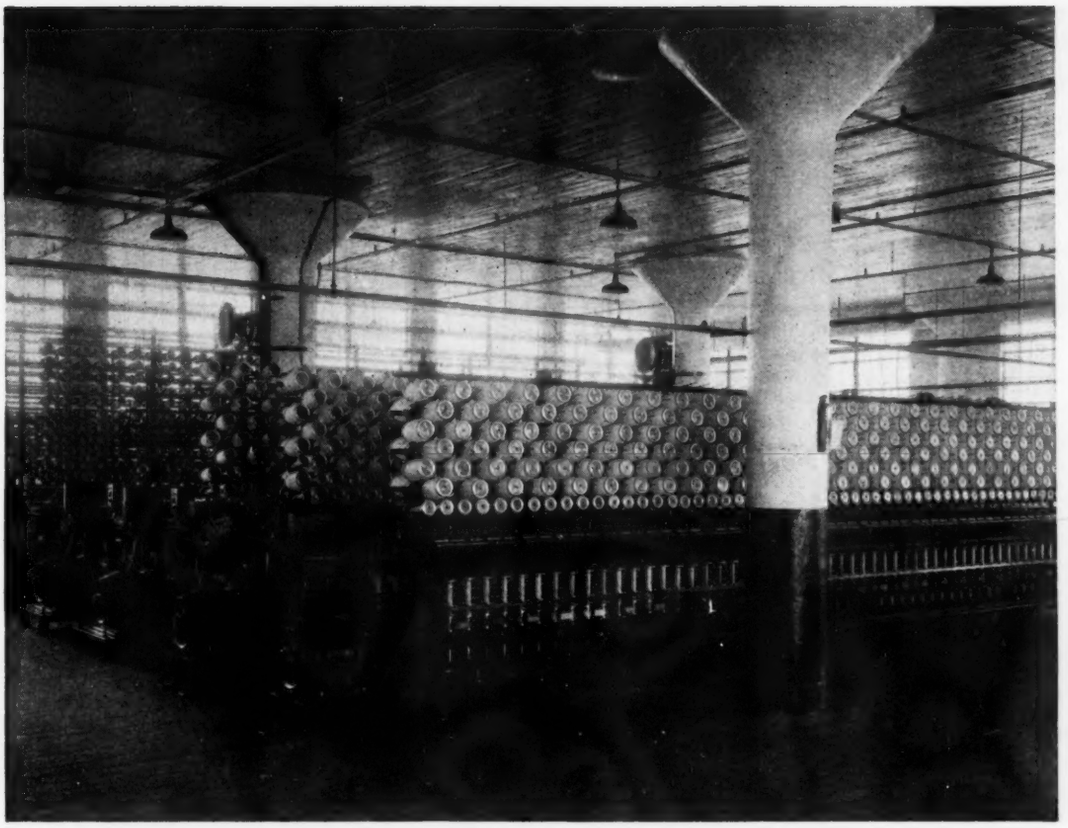
Fig. 1. Twist-gear assembly

Instead of working on the stud end, it may be more expeditious to place a drift against a portion of the jack-gear *J* Fig. 1, and then to give the other end of the drift a few vigorous blows. Care must be taken not to place the drift against one of the gear spokes as the latter is apt to crack or break. However, if no other place but a gear spoke is available, the drift should be moved frequently from one spoke to another in order to avoid damage to any one of them.

Quite often it will be found easier to force the twist gear off the stud by tapping it from behind. In this event the drift is placed against the back of the gear. If there is room, the drift can be brought through the jack-gear, since by this means the drift comes into a more parallel position with the bearing and stud. This facilitates the driving action of the drift. Since twist gears are usually solid, it is not so urgent to change the position of the drift unless it is seen that the continued blows are causing damage to the ends of the teeth of the gear.

A pinch bar with a claw at one end is a useful device in pulling off twist gears, especially in the type of frame where there is a solid background against which the curve of the claw can be placed so that the lever end can be pressed quite hard.

It is essential that the twist gear be meshed correctly. Many accidents have happened because of this gear not



Twist gears should be easily removable

having been meshed deeply enough into the intermediate gear *I*, Fig. 2. In this event, the pounding received by the edges of the twist-gear teeth either wears them down to a point where they no longer make sufficient contact with the intermediate gear, or else the incessant impact forces the twist-gear bracket away so that in either case there will be a failure to drive the front rolls. Consequently, since the spindles will continue to revolve, the thread between the traveler and the bite of the front rolls will receive excessive twist and will snarl and finally break.

On a twisting frame such a disaster is bad enough, but even worse is that case where the slippage of the gears is only occasional. When this happens, the front-roll speed is retarded at intermittent periods and the twist, of course, is increased beyond the standard required. The degree of augmentation depends on the length of time that elapses before the gears begin to drive again.

Obviously the quality of the product will suffer, since the hard twist which has been made will snarl when it is wound off the bobbins in the subsequent process. Sometimes the trouble is not discovered until the bobbins reach the latter operation. However, even though the slippage is detected before the bobbins have left the frame, there will ensue a loss of time and some waste of material when the faulty work is removed from the bobbins.

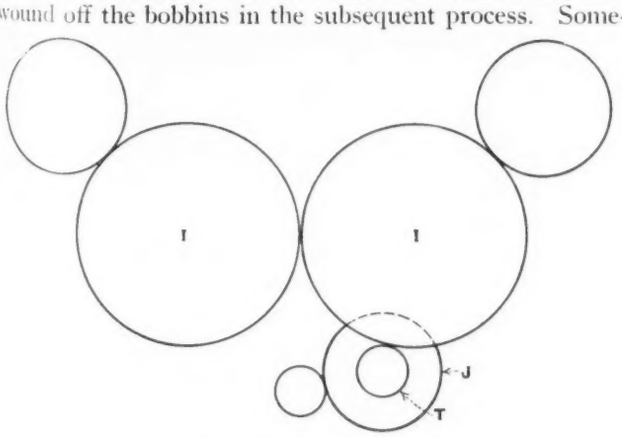


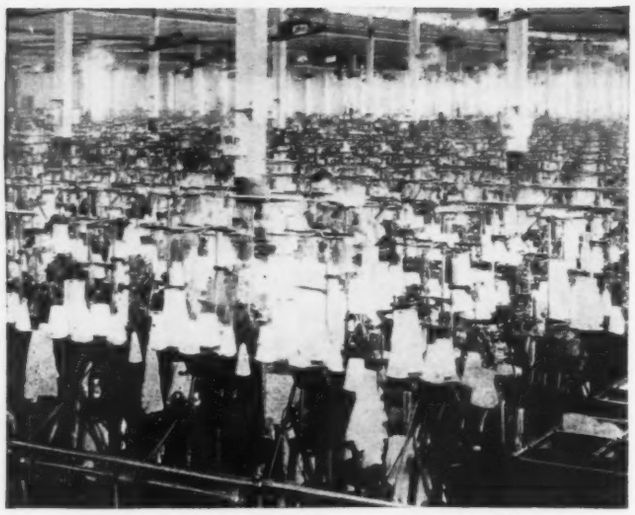
Fig. 2. Poor meshing of gears causes irregular twist

The slippage of the gears is not always due to inadequate meshing. Sometimes it comes from excessive wear of one of the two gears—the twist or the intermediate. Usually, however, the twist gear, because of having fewer teeth than the intermediate, is subject to the most wear. Another reason for this is that the strain of driving is much greater on the twist-gear teeth.

There is a certain tell-tale sound about worn gear teeth that is distinguishable from all the other usual noises in the room, and a fixer or section-hand should train his ear to catch it. He should make it a practice to take the necessary steps to correct the trouble before something happens. Furthermore, it is well to have the section-hand go over his frames periodically and to single out any gears that may show signs of excessive wear. This enables him to substitute new ones during a legitimate stoppage of the frame and thus eliminate the waste and loss of production that would ensue if the worn teeth reached the point of disengagement. In some cases a tooth will break off here and there on the gears before the big catastrophe happens.

When a pin instead of a key is used to secure the twist gear to its stud, stoppage of the front rolls will occur when the pin is worn to a point where it can no longer hold the gear in place. The stud then simply revolves as usual but can impart no motion to the twist gear. It is best to have the twist gears keyed to their studs.

One of the more simple forms of gear-end drives has been used as the basis of the foregoing discussion, but the principles involved can be applied with equally beneficial results to the most complicated of gear-end constructions on all spinning and twisting machinery.



Hosiery containing synthetic yarns should be carefully inspected for broken ends

Stitch Control

Important Factor in Circular-Hosiery Knitting

By F. R. Winwick

ONE of the most difficult problems which the executives of every circular-hosiery mill must meet is that of securing the best possible stitch at the ankles of their stockings. The highest degree of elasticity is desirable in order to prevent wrinkling above the heel when the wearer is walking. Considerable skill is required to set the stitch drum cams in such a manner as to cause the stocking to fit perfectly.

The stitch in the top of women's seamless stockings must be long enough to present elasticity; and, at the beginning of the calf of the leg, should be gradually shortened until the ankle is reached. There is very little danger of knitting the ankle too small with seamless knitting machines, but it is possible to injure the fabric by drawing too short a stitch at this point. Careful tests should be made to determine whether or not the fibers of the yarn are broken. This can be determined by mere observation or by pulling the fabric at the specified point. Hosiery in which synthetic yarns are used should be carefully examined in a good light for broken ends which may appear upon the outer face of the cloth.

Factors involved in stitch-setting include the size of the machines; the number and gauge of the needles (which ought to be standardized); the character of the yarns used and their relative size, particularly for plated fabrics; and the subsequent operations of scouring, dyeing, and finishing. While woolen and worsted yarns have an inherent elasticity not to be found in cotton, silk, or synthetic yarns, the number of needles required for women's hosiery makes it necessary to secure the form desired by a careful setting and variation of the length of stitch.

Should Keep Record

The matter of perfect fit is more difficult to attain in seamless hosiery of the plain type, since this fabric does not have the elasticity of ribbed cloth made from the same yarns. The foreman of the knitting room should have a carefully kept record of the exact number of links to be used in the pattern chain for both the leg and foot and for all the different numbers of yarn used; otherwise, as I have too often witnessed, some inexperienced or incompetent fixer will try to secure a correct boarded length by altering the stitch screws and thus ruining the feel and finish of the fabric. I fancy that before long all knitting machines will have the heads of the stitch screws calibrated so that it will be possible to keep an accurate record of the stitch settings for all kinds of yarns. Such a record would be valuable when, as now, we are knitting a great variety of styles in small lots from an assortment of yarns larger than ever before used.

On most, if not all, makes of seamless machines, each link is twelve courses long. Therefore, with the right number of links in the chain, we set the stitch for the foot first. We then set the stitch in the leg to correspond with the foot, and change the number of links in the chain to secure proper length for the leg of the stocking.

Machines of the two-cylinder type which use double-hook needles are excellent for golf hosiery and, due to the elastic character of the fabric made upon them, require less variation of stitch to secure a perfect fit. Since the needles slide from rib- to plain-knitting positions, fewer needles are used than in other types of seamless machines which knit ribbed hoisery.

The ribbed-instep type of machine produces the finest-fitting hosiery, in the opinion of the writer. When set up to knit broad-rib feet and legs with a fine-rib cuff, the stitch can be set to knit fabric which fits closely the entire length of the stocking. The stitch just above the ankle should never be set on these machines when the rib needles are out of action. A correct stitch for the ribbing at this point in the stocking will be entirely wrong when knitting plain fabric.

Just how to secure the desired results cannot be prescribed. It must be acquired by careful observation and experience. There is no better measure of a knitter's ability than the results attained in the task outlined.

◆

"I FANCY that before long all knitting machines will have the heads of the stitch screws calibrated so that it will be possible to keep an accurate record of the stitch settings for all kinds of yarns," writes the author of the accompanying article. He recommends that the knitting-room foreman keep a careful record of the exact number of links for leg and foot to be used in the pattern chain when various yarns are employed.

Breeding Cotton *for the Spinner*

By G. N. Stroman

Plant Breeder, College of Agriculture and Mechanic Arts, State College, New Mexico

THE object of the cotton breeders of the United States has been to incorporate into their varieties characters that are most desired by the farmer. However, their object should always be to breed into the variety the characters that will make the grower the most money; and those characters which make the grower the most money should also bring the spinner the greatest profit. In the past there has been a long distance between the spinner and the grower. The farmer has sold his cotton under one system of marketing and the spinner or textile manufacturer has purchased under an entirely different system. In this whole process the spinner has had the advantage for his cotton is bought on certain specifications. The writer is of the opinion, however, that the spinner has not been entirely satisfied with the cotton that he has bought under this last arrangement.

There is no doubt that any bale of upland cotton is a mixture of different quality fibers from the different plants. Some bales naturally are better in this respect than others, but nevertheless when a mill buys cotton on a certain grade and staple, it gets a bale having very little, if any, cotton of less grade than specified; and on staple it gets a bale that contains fibers whose average is the length specified. If he gets a mixture of different lengths in a bale of well-bred cotton, what kind of a mixture must he get of the characters that have received no attention by the breeder?

To illustrate the mixture of lengths that might be in a bale of cotton, one variety which the writer analyzed had a range in length of from $\frac{15}{16}$ to $1\frac{5}{16}$ in. Also frequently varieties run from $\frac{3}{4}$ to $1\frac{1}{8}$ in. in length, or from $\frac{7}{8}$ to $1\frac{5}{16}$ in. However, there are other varieties whose range in length does not vary so much. The sole reason for this is that the breeder has been producing a cotton that the farmer or grower wanted. The grower desires a high yielding cotton with a high percentage of lint, high lint index, high boll weight; and along with these a good length of lint, if possible. The farmer desires these characters because he has been paid mostly for quantity, so that quality to him has meant very little. As far as the spinner is concerned his interest should lie not only in grade and staple but also in other characteristics of the cotton fiber.

Breeding Means Efficiency

The mill is probably more interested in quality than in any other feature of the bale of cotton it buys. On the other hand, quantity does mean a smaller price per pound, but does it mean greater profits to the manufacturer? The smaller price might mean poor quality which is certain to lower the efficiency of the mill's operations. This very thing has hurt the world market for American cotton. The mill being interested in fiber quality characters such as length of lint, natural twist, body strength, body character, etc., certainly should be interested in seeing that the plant breeder uses these characters in his breeding procedure.

At the New Mexico Agricultural Experiment Station the writer is carrying forward a program of cotton breeding that should be of interest to the spinner. Each year about 400 individuals are tested for the ordinary yield characters, such as number of bolls per plant, weight per boll, lint index, per cent lint, and earliness. In addition to this a microscopic examination of the fiber from each individual plant is made, to obtain counts on the convolutions and to learn something of the characters of the fiber wall. Numerous hybrids are also used in these tests, in the hope of breeding a strain or variety that will make the grower the most profit, as well as to obtain a variety for which the spinner would be glad to pay more.

The Spinner's Responsibility

Cotton manufacturers have a definite responsibility in helping to raise the standards of American cotton. As the writer sees it, this can be done in two principal ways: In the first place, the spinners could cooperate with the cotton breeder in informing him or working out with him the certain or specific needs of the mills. The other method would be for the spinners to demand of the trade cotton coming up to certain specifications of quality not now specified.

Our whole cotton industry would be greatly improved if the spinner would pay more attention to the cotton that he will eventually use. As the writer sees it, the breeder has not given sufficient attention to characters other than the yield factors, due mainly to non-specific demands by the textile manufacturer for high quality cotton. What is needed to remedy the situation is to breed for and know the quality characters, as regards their spinning value, of the different varieties, in order that one-variety communities can be established which will keep the seed pure and give the spinner a supply of suitable cotton.

Movements of Sinkers, Knock-Overs, and Needles in

Full-Fashioned Knitting

By M. C. Miller, M. E.

Mechanical Engineer, Manville, R. I.

◆ *In this installment of his treatise on adjusting the full-fashioned hosiery machine, Mr. Miller begins a detailed discussion of the seventeen distinct positions assumed by each of the three principal knitting elements in the formation of one course of loops. The manner in which these elements concurrently perform their minute functions is a marvel of mechanical ingenuity.**

THE path of the head or hook end of the needles is shown in Fig. 42. There are seventeen positions noted, which cooperate with seventeen corresponding positions of the sinkers and knock-over bits.

In Fig. 43 is shown diagrammatically the levers and rollers of the five motions involved in knitting, including accurate outlines of the six cams which transmit the movements to the motions. This drawing also shows the seventeen positions comparable to the seventeen positions of the elements noted in Fig. 42, in which the six sets of rollers stand at any one of the seventeen positions.

Each of the motion's levers is numbered and is diagrammatically shown in Fig. 43 by a different type of line in accordance with the key provided. The same type of radiating line is used for locating the circumferential position of the roller of each motion at each of the seventeen positions noted in Fig. 42. In order that these seventeen positions of the six motions may be easily followed in Fig. 43, each series of seventeen numbers is placed in a differently sized circle on the drawing, the key numbers and line types being followed throughout.

All fixed fulcrums for the levers are marked with a solid central dot; and, in order that the proper roller for each individual motion may be clearly distinguished, a portion of each roller is marked with the same type of line used for the levers and radiating lines of that particular motion.

There is further shown in Fig. 44 a series of part cross-sections showing the sinkers, knock-over bits, and needles as they stand in relation to each other in each of the seventeen positions previously noted. [Only part of Fig. 44 is shown with this installment.] The dotted outline of the elements in any view designates the previous position of such element or elements.

In Fig. 39 (TEXTILE WORLD, July 11, page 41) the parts are shown with the needles at their extreme high position previous to yarn sinking, which is the position corresponding to those occupied by the cams and levers in Fig. 43. It is the same position as that shown in view 1 of Fig. 44.

In this position of the elements, the needles have just finished coming up. As shown by the needle up-and-down motion 4 in Fig. 43, roller 4 (dot lines) is resting in its 1 position on the lowest throw of the needle up-and-down cam *A*. As shown in Fig. 44, view 1, the fabric is resting against the under side of the sinkers. By examining the needle in-and-out motion 2 in Fig. 43, we find that roller 2 (light solid lines) is not in contact with its cam *B*, but that roller 5 (short-dash and single-dot lines) of the regulator motion 5 is resting against its cam *C* surface at 1 and therefore regulating the setting of the needles for the coming in of the jack sinkers, which will kink the yarn for the next course. In the in-and-out catch-bar motion 3, roller 3 (long dot lines) is resting against the low rest surface of its cam *D*, with the sinkers therefore in their farthest position away from the needles. In the catch-bar up-and-down motion 1, roller 1 (long dash and double-dot lines) has just about finished its movement of raising the catch bar above the jack-sinker butts by rising on the lift portion of its cam *E*, so that these sinkers can hereafter be cammed-in by their jacks and slur-cock. The knock-over bits are in this 1 position in their extreme low setting, as roller 6 (long dash and dot lines) of this motion is nearly in contact with the low rest surface of its cam *F*, being held free of cam contact by its stop hook 37 (Fig. 39), as previously noted.

Second Position

As the camshaft revolves into its position 2, no movement—with one exception—takes place for any of the motions, due to their cams being the same radius as they were at 1. The exception is the needle up-and-down motion (short dot lines), the cam for this motion lift-

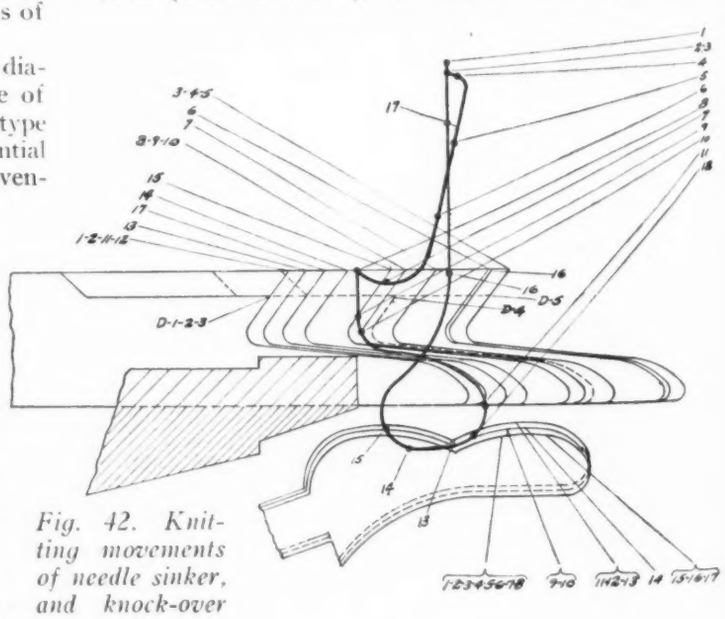


Fig. 42. Knitting movements of needle sinker, and knock-over bit

*Previous installments of this series appeared May 31, July 26, Oct. 4, and Nov. 29, 1930; and March 21, April 25, and July 11, 1931. Because the diagrams included in this installment will be referred to later in the series, the reader is advised to preserve his copy of this issue.

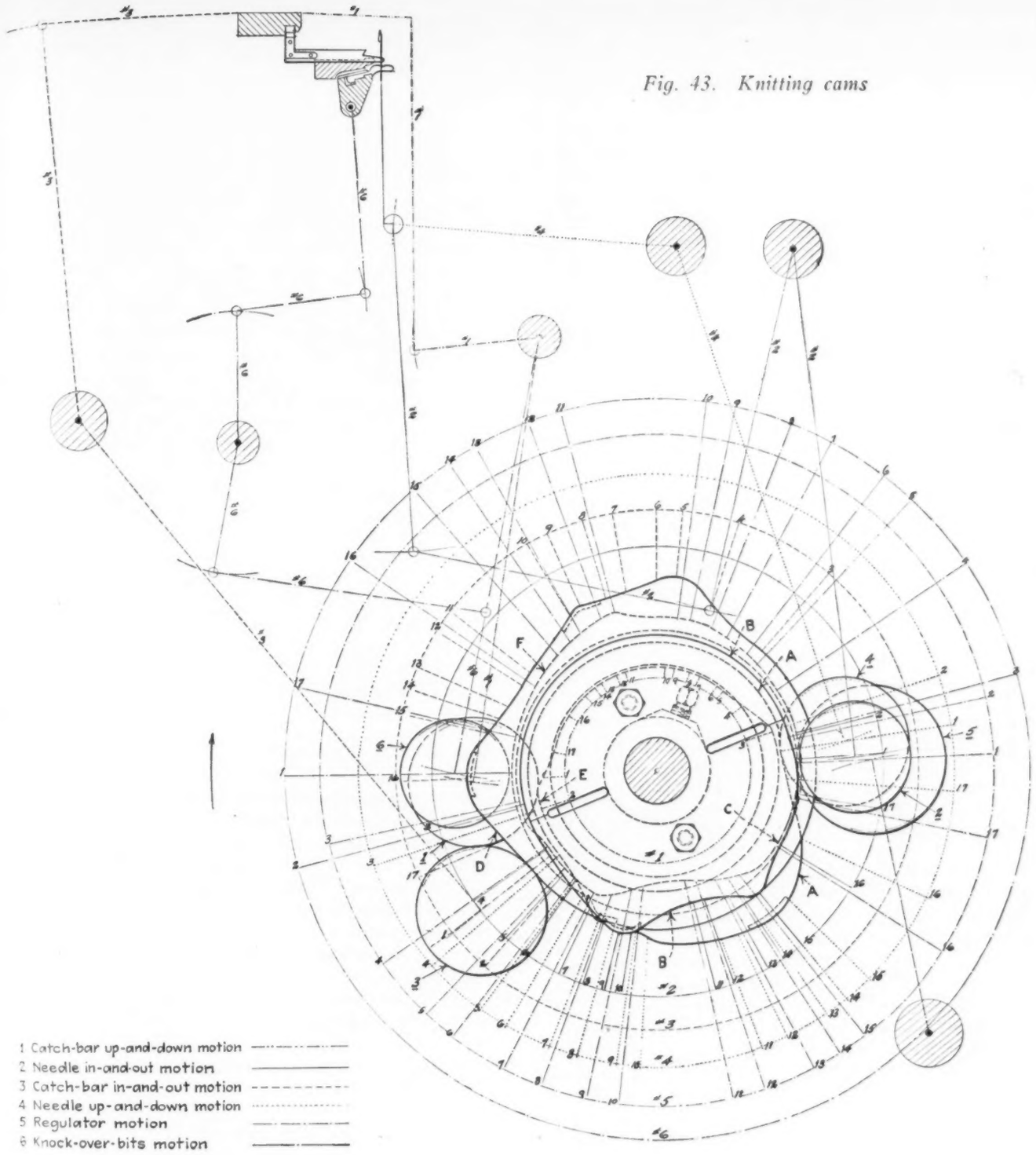


Fig. 43. Knitting cams

ing its roller slightly and in this manner lowering the needles, as shown in Fig. 42 and at view 2 in Fig. 44.

The object of so lowering the needles is to make certain that no portion of the loops on the needle shanks is above the bottom line of the sinkers. While it is true that the sinkers will, as shown in Fig. 45, hold down the sinker course bars or sinker wales of the fabric at the sinker bottom line without this slight downward needle movement, the needle loop head, due to the previous upward movement of the needle, particularly if the loops are relatively tight, might well be somewhat above the bottom line of the sinkers. Here they would interfere with the later burying of the beard tips in the eyes.

It might well be asked why the needles are raised as high as shown in these drawings, particularly in view of the fact that, as far as the actual sinking of the yarn is concerned, the needles would stand high enough if the lower end of their beards was slightly above the yarn-taking notch of the sinkers. Such shortening of the needle movement would be advantageous not only from the standpoint of reducing the distance the needles move, but it would also permit the use of shorter needles, with the resultant greater rigidity. The reason the needles must stand in this high position prior to the yarn sinking is the necessity of having the lowermost portion of the needle eye somewhat above the topmost line of the sinker,

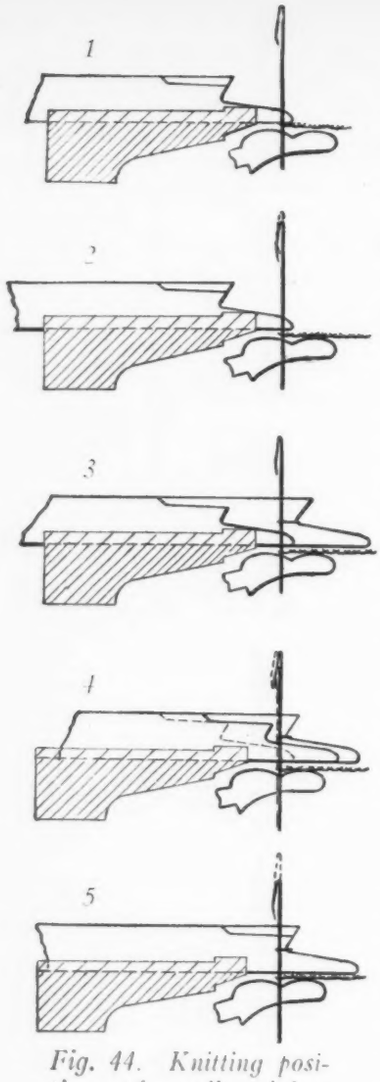


Fig. 44. Knitting positions of needle, sinker, and knock-over bit

so that, as the upper point of the yarn-sinking notch of the sinkers is brought between the needles, it will not catch in the needle eyes. This would be very likely to happen even if the needles were carefully pliered and were absolutely central between the sinkers, because the needles at the eye are considerably wider than at the other portions of the shank. This excessive widening of the needles at the eye is necessary to permit the transfer points registering with the eyes with greater certainty. The wide eyes permit the points and needles to engage with each other even though one or both of them are slightly out of line.

It will be noted by examining the cam layout (Fig. 43) that all the cams are formed for more than one-half their periphery of a constant radius from either the 1 or 2 position, so that no movement of any motion takes place during the next 180 to 200 degrees of the cam circumference. It is during this rotation of the camshaft that the Coulier motion, described in previous articles, causes the slur-cocks to operate the jacks of the sinkers so that the jack sinkers successively move toward and between the needles, preceded by the traverse of the yarn eye. In this manner the yarn is sunk between alternate needles. The yarn, of course, lies across the front shank of all needles.

The yarn is sunk by the jack sinkers to such a degree, due to only alternate-sinker kinking, that the jack sinkers stand a considerable distance beyond the back line of the needles, as shown in view 3, Fig. 44. In this manner the required amount of yarn for the course is measured, even though it is only alternately kinked. At this time the jack-sinker butts should be within .004 to .008 in. of the verge plate, as noted in previous articles, so that if a jack were to drive any jack sinker to the verge plate, an excessive amount of yarn could not be measured, the verge plate effectively stopping any appreciable overthrow.

If we now study Fig. 43 and examine the position of the six rollers at the 3 position, we shall find that they are all still opposite; that is, on the radial portion of their cams with the Couliering or yarn sinking finished. All jack sinkers therefore stand as shown in view 3, Fig. 44.

As the camshaft continues to rotate in the direction of the arrow (Fig. 43), we shall see that the 3 (long dot) roller of the catch bar in-and-out motion commences to rise on its cam, in this manner moving the dividing sinkers toward the needles. At the No. 4 position, the sinkers will occupy the position shown in view 4, Fig. 44. It will be noted that in the regulator motion (long dash, single dot) roller 5 has moved to a lower position on its cam and in this manner has moved the needles away from the sinkers slightly, as shown in Fig. 42 at 4.

The object of this slight movement of the needles away from the sinker is to permit the needles to be relieved of the yarn-sinking strain, which has slightly flexed them, and to permit the dividing sinkers to take and form their kink from the yarn so released.

It will also be noted that in the catch-bar up-and-down motion (dash, double-dot lines) roller 1 has, in going from position 3 to 4, moved partially to a lower position on its cam, in this manner lowering the catch bar enough to contact later with the butts of the jack sinkers so that they can be withdrawn. All the other motions, in moving from position 3 to 4, remain as they were at position 3.

In moving from position 4 to 5, the catch bar completes the forward stroke of the dividers, its roller 3 rising to the extreme throw of the in-and-out catch-bar cam, as shown in Fig. 43. The resultant position of the dividers is shown in view 5, Fig. 44.

As the regulator-motion roller 5 rests on a rest portion of its cam, the needles do not move in or out between the 4 and 5 positions, other than that they go out slightly immediately after the 4 position, as seen by the drop in the cam *C*. The slightly inner position, shown at 5, as compared with the extreme outer position of the needles after 4 (Fig. 42), is due to the arcuate motion of the needle up-and-down lever, which, between 4 and 5, draws the needles down to the position shown in view 5, Fig. 44, due to its roller 1 rising on its cam, as shown in Fig. 43. This slight moving away of the needles immediately after 4 is to lessen slightly the strain on the kinked yarn after the dividers have come all the way in.

The end of this dividing motion at 5 should be so adjusted as to flex the needles slightly and bring the dividing sinker butts within .004 to .008 in. of the verge plate in order to kink and strain the yarn evenly. The more energetically these kinks are formed, without excessively straining the yarn, the more even the fabric will appear.

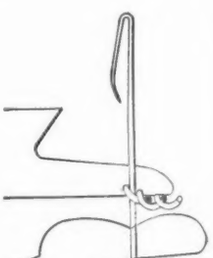


Fig. 45. Frictional movement of yarn or loop with needle

It is to be understood that, when setting the dividing catch-bar motion, the verge plate is to be used as a gauge, the degree of flexing of the needles being adjusted by the in-and-out needle motion. At this time, as previously noted, this motion is under the control of the stitch regulator. For this purpose the rest portion between 4 and 5 of the stitch regulator cam should be fitted with an adjustable portion, so that the kinks in the yarn already formed are not disturbed, or so that the needles are not overflexed; but as machines now built are not fitted with this adjustment, the regulator-cam shape alone must determine the degree of needle flexing.

In moving from 4 to 5, the catch-bar up-and-down motion lowers the catch bar to its extreme low position, with the jack-sinker butts now located in the groove of the catch bar, so that they can later be caused to move away from the needles in conjunction with the dividing sinkers. The falling of the catch bar is due to its roller 1 finishing its downward motion to the low rest portion of its cam, as shown in Fig. 43, the other motions remaining as they were.

(To be continued)

Fig. 1. Cop contacts entire length

Fig. 2. Cop with play at bottom

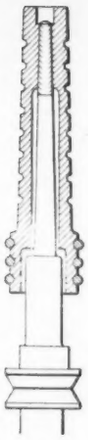


Fig. 3. Bobbin with play at bottom

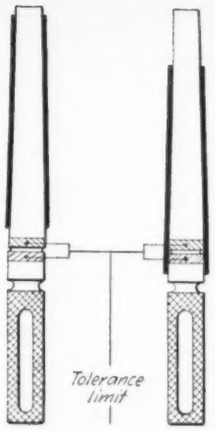


Fig. 4. Too high on gage

Fig. 5. Too low on gage

Correct Fitting of Bobbins *on Ring Spindles*

◆ *Because poorly fitting bobbins can nullify all effort expended to make spindles run properly, spindle manufacturers are interested in insuring that mills employ bobbins of correct dimensions. For this reason the Vereinigte Kugellagerfabriken, A. G., German manufacturer of the SKF-Norma roller-bearing spindle, has made a study of bobbins in relation to the requirements of ring spindles. The recommendations formulated as a result of this investigation and released by Emil Adolff, A. G. Reutlingen, Germany, through its American representative, J. I. Bernitz, New York, are presented herewith.*

THE bobbins should be placed as low as possible, so that the center of gravity of the rotating and partly vibrating load will not be too high on the spindle. Eccentrically rotating masses are liable to develop too great a bending moment on the blade. The bobbin should fit the top end of the blade as tightly as possible, and be but loosely guided below on the whorl. Attachment of the bobbin at the top of the blade has been found to give the best running. A bobbin so driven has a damping influence on vibration, and the spindle on which it is placed is the least inclined to vibrate.

This way of placing bobbins and cops on the spindle blade is illustrated in Figs. 2 and 3. It will be observed that the contact with the blade is at the top only, and that there is a certain amount of play (at least 0.2 to 0.3 mm.) at the bottom. This loose guidance at the bottom gives the rotating mass a certain mobility for self-centering while running at high speeds.

Too much play (more than about 0.5 mm.), on the other hand, should be avoided, since it permits the axis of the cop or bobbin to get out of line with the spindle axis when the loading is uneven or the centering not accurate. The rotating mass is then liable to create a greater centrifugal force than otherwise would be the case. Only cops of thin paper can be used with their whole length in contact with the spindle blade (Fig. 1).

All that has been said concerning contact with the blade and the bottom play, applies with equal force to wooden bobbins with flanges, such as are used for twister spindles. If these bobbins fit tightly throughout their length and do not have the play mentioned above, the spindle blade is liable to bend.

Dimensions of Bobbins

The spinner must see that all bobbins will as far as possible be level with one another, so that the yarn will be wound on in the right position.

Bobbin manufacturers can supply well-fitting bobbins only when they know the exact dimensions of the spindle tops. To have bobbins made according to the first spindle that comes to hand cannot be recommended; since spindles, even when they are received together in the same batch from the makers and are to all appearances identical, are subject to variations in diameter and length due to the manufacturing tolerances employed. The bobbin maker might therefore receive a spindle with plus tolerances (machined to the high limit), or a spindle with minus tolerances (machined to the low limit). It would be pure luck if the spindle had the exact nominal dimensions, and even then he ought to know the manufacturing tolerance.

He should therefore be furnished with a bobbin gage showing him clearly and simply what the admissible plus and minus limits are. For this purpose the bobbin gage should be graduated so as to show the highest and lowest admissible positions of the lower extremity of the tube (see Figs. 4 and 5). On the gage shown in Fig. 4 is a cop with its lower extremity above the hatched tolerance area. It is therefore too small in diameter. The cop on the gage in Fig. 5, on the other hand, is too large in diameter. The bottom extremity of the tube must always come within the hatched tolerance area.

For testing the bobbins when received from the makers, the following method is the best: Place the bobbins one after the other on a perfect spindle rotating at the normal working speed, and pay special attention to their behavior when they are being started at the normal rate of acceleration. It will be found that after a little practice it is possible by this means to recognize and eliminate tubes capable of causing vibration of the spindle. This test is not only simpler but more reliable than measuring, since it constitutes to some extent a test for balance.

Mill owners who have discovered by practical tests how much the elimination of defective bobbins serves to increase working speed and therefore production, and how much it decreases waste, test their bobbins regularly and systematically. With plain-bearing spindles, the wear of the bearing bush and spindle blade is increased by defective bobbins, although some time may elapse before the effect on the running of the spindle becomes apparent.

Full but Pliant Hand Is Aim in Finishing

Cotton Lining Fabrics

By Fred Grove-Palmer

◆ *Our Questions and Answers Department recently received the following inquiry: "We understand that in finishing cotton lining fabrics it is the practice in England first to backfill the goods, and subsequently to apply additional finishing materials to the face. We should like to know whether this method is in common use; and if not, what is the usual procedure for finishing twills and similar lining fabrics." It is believed that the accompanying article outlining the methods employed by English finishers and written shortly before the death of the author, will be of interest to a number of our readers.*

IN FINISHING cotton lining fabrics, the principal requirement is to obtain fullness and substance, combined with a soft hand. The finish must be such that the lining will lend support to the apparel, but will not give it an air of stiffness or awkwardness. Careful selection of finishing materials and proper mechanical treatment are essential therefore, if the desired result is to be obtained. Most finishers of lining fabrics base their formulas on some form of starch, because of the body which is obtainable with this material. Special effort must be made, however, to counteract the natural stiffening effect that is produced with starch, and at the same time to retain the desired qualities. Fabrics commonly employed for linings, especially of men's garments, are those having a 2x2 or 2x1 twill weave; and when properly finished, these constructions have the characteristics mentioned as necessary.

A basic formula which has been found satisfactory is prepared as follows: 75 lb. of potato starch is placed in the starch kettle and stirred with cold water to a thin paste free from lumps; steam is turned on, and a little more water poured in. As soon as the starch begins to break, 1 lb. of soap and 1 pint of soluble oil are added, and boiling is continued until the batch is thoroughly cooked. Water is now added to make 120 gal., and the steam is turned off. The starch is applied on an ordinary two-bowl mangle, or on a friction mangle which has the upper roll geared to a greater speed than the lower roll which is running in the solution.

Some grades of material require a glaze finish, while still retaining softness of hand. For this purpose, a formula containing some kind of wax is employed. A typical finish of this type consists of 50 lb. wheat starch, 50 lb. potato starch, 5 lb. palm oil or sulfonated oil, 5 lb. bees-wax and 2½ lb. paraffin wax (low melting point), made up to a total volume of 120 gal. In the application of this mixture, the steam must be kept on; otherwise the waxes are liable to separate and produce unevenness which will cause difficulty in the subsequent processes. The machine usually employed in this case is a backfilling mangle. Leaving the backfilling machine, the fabrics are dried on cans, and afterwards are wet out and run through the frictioning machine or a heavy calender.

Linings which are dyed can be glossed by using the same solution as that mentioned above to which has been added a small quantity of the same substantive coloring matter as was used for dyeing. When the finish is applied to both sides of a fabric of average weight, it requires about 120 gal. for each 2,000 yd. Naturally, a smaller amount is used when the finish is applied on the backfilling machine.

Two-Run Method

A number of finishers advocate a combination method in which the goods first are backfilled and then are "faced-up" with additional sizing in a subsequent operation. Those who adopt this practice hold that it is more economical than the ordinary method of filling the two sides of the fabric during the first passage. There are weighty arguments advanced for and against the procedure. The actual difference in cost involved is small; and other finishers believe that any savings are counterbalanced by the additional processing which is required.

After drying, tentering, and conditioning, the goods are calendered. The type of calender depends upon the appearance and handle which is desired. A method which is often made use of for improving the looks of cloth and giving it a more closely woven appearance is chasing. In this operation, the amount of pressure applied, the number of rolls employed, and the number of layers of cloth passing through together are all factors which need to be considered. Again, the Schreiner, with its masses of finely engraved lines, produces an embossing of the surface of the material and gives rise to another form of luster. Each method has its definite place in the industry, depending upon the finish desired.

The amount of moisture in the goods and the temperature of the calender rolls have an important bearing on the final handle and appearance of the finished fabric. If the temperature of the calender, for instance, is only moderately low, the handle of goods containing a certain quantity of moisture will be softer and more elastic than if the temperature is high.

In spite of every precaution, there are many occasions when the goods are too harsh and stiff when they leave the calender. In such cases, they have to be passed through a button breaker or a stretching machine to secure the desired softness and pliancy.

Questions... *and* Answers

Binder Warp and Pile Weaving

Technical Editor:

I wish to ask your advice on the best way to rig up a loose binder warp to weave mohair plush for the best results. Kindly advise me when harness the loose binder end is drawn in on and how the tension is regulated. The more information, the better. (7640)

The usual practice is to draw the binder ends, which are held on a bobbin or small spool, through a separately operated harness. This is operated by the cam lift by means of a string or thin cord tied to the cam levers. The tension, which should be very light, may be regulated by simply hanging a heavy piece of bent wire, known as a "hair pin," over the binder ends.

▼

Defect in Rayon Hosiery

Technical Editor:

I am inclosing a sample of rayon hosiery which contains oil spots. I boil off for 1 hr. with 6% of a good oil and 6% of trisodium phosphate. I then rinse for 10 min. and refill the machine, starting the dyebath of 110° F., and running for 10 min. with 2% of oil. The dye is then added and run 10 min.; steam is turned on and the bath brought to a boil. The goods are run 50 min. at the boil; 2% of glauber salt is added; the goods are run another 10 min., sampled, and rinsed for 10 min. at 110° F. The lot is then taken out, finished. I shall appreciate your advising me as to how these spots occurred and what may be done to prevent a recurrence of the trouble. (7637)

Our examination indicates that your trouble is more in the line of wrinkle marks than oil spots, and probably is caused by letting the goods lie too long in a damp condition before boarding.

In some special cases it is advisable to allow rayon hosiery to lie several hours before boarding in order to equalize the moisture in the hosiery, and prevent breaking stitches in the knitting while pulling the stocking over the boards. As a rule, however, it is found that best results are obtained when the hosiery is boarded immediately after coming from the extractor. The wrinkles are fresh and easily pulled out, while if they are left in the hosiery for any length of time they set, partly dry in the hose, and in some cases, become impossible to press out. Again, while the goods are lying in a damp condition, the moisture will drain and collect in the wrinkles and leave a dark, greasy mark similar to the spots in question. The darker the shade, the more prominent the spot will appear.

We believe that you will obtain better results with rayon hosiery if you change your method of boiling off. It is our opinion that you are boiling off for too long a time. You did not state whether you use a boil-off oil or a regular sulfonated castor oil with the trisodium phosphate. For boiling off rayon and cotton, 2% soda ash (or an equivalent amount of trisodium phosphate) and 6% of oil should be sufficient. Dyeing may be carried on in the same bath at the same time. Salt may be added after the goods have been boiled in the dyebath for 30 to 50 min. After dyeing, the hosiery should be given a good washing in several changes of warm water.

▼

Fulling Beret Caps

Technical Editor:

Enclosed please find three beret caps and samples of the fulling materials we use on them. We full in an ordinary family washing machine, cold. The blue caps full entirely satisfactorily, but we cannot get good results on the white. The pink cap is not so satisfactory as the blue, but is much superior to the white. I am also enclosing samples of the white and blue yarn, and one of the white caps before fulling.

We full the colored caps 35 or 40 minutes, and the white caps 10 minutes longer. We cannot give them any more extended treatment because they would shrink too much to permit being boarded to proper size.

We should appreciate your explaining why we cannot get the results we want with the white caps. (7607)

The difference in appearance is due to the colors entirely. Dark shades always look more solid than the light. The latter show the design or stitch more clearly.

This trouble is common in woven materials. Broadcloths, suedes, and velours always show the design more clearly when dyed in light shades than when dyed in dark. To overcome this trouble, the finisher fulls the light shades more.

There are two solutions to your problem. You may make the light-colored berets larger to begin with, so as to allow more shrinkage; or you may make them with a finer stitch so that they will be closed by the amount of shrinkage allowed. A finer stitch means more yarn.

We notice a difference in size between the three caps. The white is $\frac{1}{8}$ in. wider than the blue. The pink is slightly smaller than the white and larger than the blue. The blue, being dark, could well be the largest of the three, as it would look better than the white even if the latter were narrower. The light shades, however, should be kept firmer than the dark.

To convince yourself that the trouble is largely the effect of color, dye one of the white berets to a medium or dark shade after fulling and you will find it much improved.

▼

Breakage of Doupioni Filling

Technical Editor:

I see a lot of "Shantung" and "Rajah" being worn at present and I notice the stores selling it very cheap. This indicates to me that the weaving costs in the producing mills must be very low.

I have just completed a small order for this kind of cloth, and the costs were very high. This was caused by the excessive number of filling breaks. They averaged 72 per day per loom for twelve looms. Even with one loom to a weaver I could not maintain a satisfactory production. The yarn was 200/250 Italian doupioni and was kept properly conditioned while in use. This was done according to instructions.

Now in order that you may fully understand my problem, I am sending you three partly woven cops for your examination; and if you can give any information as to how I can get this filling yarn off the cop without it snarling on the nubs, I should appreciate it very much. (7632)

The nature of doupioni filling is such that breaks will occur wherever the cocoon slugs are excessive in number and large in size. However, the cops submitted, with the exception of one slug, show that the slugs are not so large

that trouble would occur from this source. This filling would cause little trouble on step quills or in the shuttle which, in the silk trade, is often referred to as the wool shuttle. The cops that were submitted also show a rather long traverse, and this would tend to cause breakage. Make a shorter traverse so that the cop will be built up more quickly and have a shorter step; this allows the filling to come off the cop with less friction and prevents the filling from lapping in back of a slug and breaking. The cops show that when the thread runs down, the sweep is entirely too long for the nature of the filling and causes excessive breakage.

Care must also be taken in the selection of the proper type of shuttle. The type of shuttle referred to as a wool shuttle, having the plates and springs near the point of the cop inside the shuttle, should be used. The doupioni runs out through the two plates and then through the bead of the shuttle. The springs holding the plates in place should be light, as the filling needs but little tension. If the ordinary silk shuttles are used, cut off all but two of the rings on the tension ring and pull out all but the last two tension posts. The tension rings, as set, do not allow free passage of the slugs.

To prevent the snarls, fur the shuttle heavily at the point of the cop—a piece of fur on each side—so that when the spindle is down, the cop extends into the fur about ¼ to ½ in. The sides of the shuttle should be free from fur except the two short pieces in front.

▼

Cotton Yarn for Mops

Technical Editor:

I am enclosing a sample of cord. I believe it possible to make from this material a mop which would be both salable and profitable, but am not familiar with the process required for cleaning the cord. Will you advise me how to bleach it and also if there is a chemical solution in which it could be dipped to prevent it from coming apart in water. (7610)

It is perfectly possible for you to bleach this cotton yarn and obtain a good, clear white; but most of the mop yarns which we have seen have not been bleached or rendered absorbent. If desired, however, the yarn could be given a thorough boiling out with soda ash and some penetrating agent. This treatment would make the yarn quite absorbent and would remove most of the waxes, motes, shives, and other impurities, but would not improve the color a great deal.

Any chemical treatment employed to hold together the fibers in the yarn would render the mop yarns non-absorbent and water repellent.

We do not know what particular type of mop you desire to make, but are of the opinion that you would be able to make a better and cheaper mop if you use a coarser count of yarn. In other words, unless it is intended for some special dusting purposes, this yarn apparently is too fine and, therefore, too costly to produce.

▼

Warp Streaks in Acetate Crepe

Technical Editor:

We are enclosing a sample of acetate crepe which contains streaks running through the warp. We should be pleased to have your opinion as to the cause of these streaks. (7626)

From the regularity of spacing and general appearance of the defects in the sample acetate crepe, we can definitely state that it is due to uneven tension of certain threads in the warping.

It is probable that this warp was prepared on a silk type of warping machine. The creels holding the spools often have irregularities on their spindles, or the spools themselves may be chipped and run with uneven tension. When the yarn is passed through the warper, a great deal of tension is applied at the point where the warp is actually laid up on the reel. Since the acetate yarns in general are not very elastic, they tend to remain stretched and taut, and retain an uneven appearance after all tension has been removed.

That the defect was not caused in weaving is apparent, as the tight threads show definite traces of having come through in each section of the warp when it was placed in the loom. There is no remedy that we know of for the condition in the finished piece.

▼

Explanation of Shantung Analysis

Technical Editor:

On page 28 of the May 9th issue appears an analysis of a shantung. There are two points in this analysis which I would like to have made clear. In the first place, how do you decipher the statement—"56/3/2 or 336 ends per inch." In the second place I should like to have the following warp layout made clear:

14 dents of 4/2 = 56/2 edge
2380 dents of 3/2 = 7140/2 ground
14 dents of 4/2 = 56/2 edge

2408 7252/2 or 14504 ends

Any information you could give me about this would be appreciated. (7631)

Since Carl C. Mattmann, Jr., is the author of the analysis in question, we have referred your inquiry to him, and he replies as follows:

"The statement '56/3/2 or 336 ends per inch' means that a 56 reed (56 dents per inch) is used, with six ends, two ends from each of three heddles, in a dent. Thus, 56x3x2 gives 336 ends per inch in the loom, and this would be quoted in the cotton-weaving field as 336 sley. Sometimes the above is quoted three in a 56 double. This makes it a six-harness plain weave. If it were a four-harness plain weave, it would read 56/2/3, or two in a 56 triple, giving 336 ends per inch.

"With respect to the second matter, the edge must be made stronger; therefore you add another heddle, making it four heddles with two ends in each heddle, or eight ends. We wish to make a ¼-in. edge. One-quarter of 56 is 14 dents to each edge of four heddles; and since there are two ends per heddle, there will by 56/2, or 112, ends per edge, making it 25% stronger than the same space in the ground."

▼

Dyeing Felt Hats

Technical Editor:

We have a batch of felt hats to dye, and are experiencing difficulty in obtaining good penetration of the material. The hat hoods are of two qualities. One of them is a fair quality woolen felt. The other is a poorer quality, heavier-milled material, which contains a considerable amount of acid.

Before dyeing, we wet out the hats for 40 min. in a boiling bath of water containing sufficient ammonia to just turn red litmus blue. We then prepare our dyebath as follows for a dark fawn shade: 15% of glauber salt and 1% of Tetracarnit. The dye formula comprises Azo Rhodine 2G, Xylene Yellow 3G, Orange 2G, and SAP blue.

We enter the material at 60° C., raise the temperature to the boil in 30 to 40 min., and boil for 1 hr. We then add 1½% of sulfuric acid gradually in three portions, and boil for a further 30 min. We obtained a good level shade, but on cutting into the material we find the inside much lighter.

We should be obliged if you could point out to us how we can improve the process to obtain better penetration. We might say that we first made up the formula in the laboratory on a 10-gram sample of the felt material, upon which we obtained excellent penetration. (7627)

Your procedure and choice of dyes seems to be correct in every respect, and we do not recommend any change except to suggest that you do not need so much Tetracarnit, the proper amount being only 2 to 3 oz. per 100 gal. of dye liquor. There remain two possible reasons for poor penetration. The first is that the ammonia bath has not completely neutralized the acid left in the felt from the fulling operation. We would dispense with this bath entirely and add about 7% of sodium acetate to the dye and glauber salt. This will penetrate well and change any free sulfuric acid to acetic acid and glauber salt. A large amount of glauber salt will favor penetration; but as it has a

tendency to open the felt, it is not looked on with favor by hat dyers. The dyeing must be continued until penetration is effected, before any acid is added, because after the color has been sprung with acid, there is no hope of further penetration.

The second reason may be that you are dyeing with an open steam pipe, whereas in your laboratory experiment, you used external heat and actually reached 212° F. The open steam pipe not only gives an ebulition at 200° F., but is adding condensed water to the bath. Hat dyers generally use copper-jacketted kettles, with which they get an actual boil, although on some classes of goods any dyeing method will do. The goods you are dyeing may be just in the condition where the difference between external heat and an open steam pipe will make penetration difficult. Both of these suggestions are simple to carry out, and we believe that one or the other of them will enable you to solve the problem.

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Cloth Refinishing and Shrinking

Technical Editor:

We were interested to read in the June 27th issue of TEXTILE WORLD an article on the subject of cloth refinishing and skrinking. We wish, however, to call attention to the illustration.

Many years ago presses of the type illustrated were used in textile mills, and the plates, as the author says, were heated in an oven and then transferred to the press. The obvious disadvantages of such a procedure have been overcome in the modern plate press.

Today the press carries its own electrically-welded hollow steam plates. The goods are first papered up, a bolt to a space, and put in the press between the hot plates. By a variation in pressure and heat applied, any desired finish can be put upon the goods; and then while the pressure is still on, the heat is turned off and cold water driven through the plates. The effect of this is to set the finish, making it last long after the goods are removed, and even when they are exposed to dampness.

Many of the best mills in the country are using these presses for their high-grade work, and it appears to the writer that the clother finishers and shrinkers would find it to their advantage to make use of them. CHARLES WILLIAMS
Nashua Steam Press & Boilers Works.

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Dyed Hosiery Uneven in Shade

Technical Editor:

We shall appreciate your opinion as to the cause and correction of a difficulty we are having. There are two finished stockings enclosed, made from four-thread hosiery yarn, tinted light blue. These were degummed in a 6 to 8% olive-oil soap bath, from ¾ to 1 hr., dyed in a neutral bath, and then finished with a light dull (delustered) finish. These stockings were dyed in the same bath, and are supposed to be the same in make-up. Each stocking is of a different shade.

In the same lot there are several shades. We note too a difference in shade between the top and the leg of the stockings. If the difficulty lies in the dyeing operation, we feel that the shades would be uneven in individual stockings. Is it possible that the difficulty lies with a lighter stitch in some stockings than in others? (7628)

It is our opinion that the light and dark shades appearing in stockings submitted are due largely to tight and loose knitting in the hosiery. One of the two stockings submitted can be stretched fully 2 in. wider than the other; and naturally the tightly knitted stocking will appear fuller in shade than the loosely knitted one. For the same reason, the top of the stocking looks different in shade than the leg.

Your degumming method also is at fault. For a four-thread stocking a 30-min. boil off should be sufficient, providing there is enough degumming material in the bath; but 6 to 8% of olive-oil soap is decidedly not enough to do a good job of boiling off silk, even with the softest water. To boil off silk properly, it takes at least 20% of soap, unless of course, some other degumming agents, such as soda ash, sulfonated oil, silicate of soda, or other detergents, are used in connection with the soap. By using enough soap in boiling off you will secure a much better penetration in your dyeing; and will do away with the white line which is much in evidence where the thick part of the sole connects with the upper, thinner part in the foot.

Uneven dyeing of this kind can also be caused by using silk thrown by throwsters who are using different soaking emulsions. If one throwster uses an emulsion containing mineral oil, and his silk should be mixed with silk thrown by a throwster using vegetable softeners only, there will surely be several shades in that lot after dyeing in spite of all the precautions used by the dyer.

Another common source of uneven dyeing is the use of silk which has been allowed to lie too long in storage after coming from the throwster, thus permitting the softening solution to be dried and oxidized on the fiber. This silk will be found to dye darker than the silk which has been used when fresh from the throwing plant.

Inquiries should give the fullest information possible; and if damaged material is involved, a sample should be sent. We give no consideration to anonymous inquiries and do not undertake routine analysis of yarn or fabric, or investigation involving unusual expense.

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Uneven Shade in Hosiery

Technical Editor:

We are inclosing two hose. You will note that the leg is darker than the foot. The change in color takes place where the yarn starts into the foot at the heel. This hose is 150-denier rayon plated over 150-denier acetate. We often have the whole stocking dark; then the next stocking will be of a lighter shade. All stockings are knit with same yarns and dyed in same dyebath. Can you tell us what is causing these different colors? (7635)

It is our opinion that the defect with which you are troubled is not caused in the dyehouse. Where the yarn starts into the foot at the heel in the stockings, the yarn is tighter than in the upper part of the stocking, thus causing the fabric to be perceptibly stiffer, but in spite of this, there is no uneven dyeing. An examination of the inside of the stocking indicates that at this point the acetate yarn has been knit with too much tension, and consequently, the colored rayon apparently is lighter than in the leg. Reducing the tension of the acetate yarn will undoubtedly remedy the trouble.

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What's Wrong Here?

Editor, TEXTILE WORLD:

Probably because I always insist upon American made products wherever possible, I was a little bit surprised at a situation which I recently noticed at home.

An over-stuffed set of a divan and two chairs needed re-upholstering. The different upholstery people of our locality were called in and they submitted samples of materials and prices on the job.

There was not one sample of over 100 that bore the name of an American manufacturer. Every piece was imported. I raised the question as to why we could not have good designs and good workmanship on American made materials and as yet have not had the answer.

What's wrong? Are the foreign materials better or foreigners simply better merchandisers? A CONSUMER

[*Editor's Note:* The above letter represents a challenge. Don't we make attractive and durable upholstery fabrics in this country? Or, don't we merchandise them properly, so that the men who do upholstery jobs locally might be able to show domestic as well as foreign samples? Or, is this another case of the virility of the "imported" fetish? We should appreciate thoughts from our readers.]

German Rayon Quota System May Extend To Other Countries

THE proposed yarn marketing convention in Germany, which has been evolved as a result of the Berlin conference, promises to have a far reaching effect upon the European rayon situation. The system is being worked out by the A.K.U. group in conjunction with the I. G. Farbenindustrie and the principal companies importing rayon yarns into Germany. The last three years have seen exceedingly keen competition between the home producers in Germany and the various countries exporting to Germany, principally Italy. The details of the new quota system are not yet completed, but the arrangement is expected to be put into force in the very near future.

Preliminary details give the following percentages of the total consumption of viscose rayon:

A. K. U. (Dutch and German branches)	50%
Italian rayon companies	17%
I. G. Farbenindustrie	15%
Other foreign and home producers	18%

On the basis of the first quarter of the current year German consumption is at the rate of 60,000,000 lb. which means that under the quota system the Enka and Glanzstoff factories (A.K.U.) will be responsible for 30,000,000 lb. annually in Germany alone, provided, of course, that the agreement is extended to include acetate and cuprammonium yarns. The quota system will be put into operation by means of a Central Sales Bureau and prices will be standardized. The scheme has already reached a sufficiently advanced state to enable an increase of 20% in prices, which came into force at the beginning of June.

It will be run on lines similar to the existing Italian Rayon Convention by which the Snia, Chatillon and General Viscose companies pool their sales on a quota basis for the home market. The favorable effect of the convention will be the elimination of price cutting. It is stated that it is not the intention of the convention to unduly inflate the prices of rayon, but it will enable prices to be so regulated as to allow a margin of profit and to keep efficient plants from working at a loss. The consumers, of course, will get the benefit of price stability.

Whether Dutch exports will be maintained at the present level will largely depend on the decision of the A.K.U. management, which controls such a large share of the production in both Holland and Germany. Italy will still be able to export fairly substantial weights of rayon yarn into Germany. The putting into practice of the quota system, of course, is complicated, but negotiations had reached such an advanced stage on July 1 that the participating firms ceased to accept orders for yarns; it is expected that the new sales organization will be put into operation immediately.

The real significance of the quota plan is that it constitutes a bold bid to put the European rayon industry on an economic basis again, and there is no doubt that the German move will have a beneficial effect upon the market in other countries. There is talk in Germany of the Syndicate being extended to include markets other than Germany; indeed it is regarded as but a step towards the formation of the International Rayon Producers' Syndicate, according to the latest German ideas.

There is not much chance of any similar working arrangement being developed in Great Britain; price cutting there has been much less prevalent lately. It is generally considered, that without the cooperation of British and Belgian producers, it will not be possible to include acetate yarns in the new German Convention, though Germany, controlling as she does the cuprammonium market will probably be able to arrange for the sale of this type of yarn under the new agreement.

▸ Character of Year's Canadian Wool Clip

With much wool from Ontario already graded and cars beginning to arrive from all parts of the country at the various warehouses of the Canadian Co-operative Wool Growers, officials of the organization are now in a position to make a fair summary of this year's clip. That from Ontario is strong in staple and bright, while the first of the clip from British Columbia indicates that the present wool is well up to the standard of previous years. Western range wool is strong and exceedingly well-grown, but shows marked evidence of recent sand storms.

Canada's total wool clip is about 21,000,000 lb. annually, or half the requirements of the Canadian mills. Canadian consumption of manufactured woollens equals four times the clip.

▸ Percentage of Long Sheets Increasing

A survey just completed by the Cotton-Textile Institute establishes the fact that 108-inch length sheets comprise a steadily increasing percentage of the total volume sold by leading merchants. This, according to George A. Sloan, president of the Institute, is doubtless due in no small measure to the policy of merchants in cooperation with wide sheeting manufacturers in basing their appeal to the public upon the satisfying qualities of comfort, sanitation and appearance.

▸ Textile Imports Under Different Tariffs

Some of the effects of the different tariff acts under which this country has imported textiles are revealed in a study compiled by the U. S. Tariff Commission which covers imports of raw materials and manufactures from 1891 up to 1930. An interesting fact is that while the annual average imports of manufactures has increased in value about 300% since 1891, the increase in value of raw materials imported was around 1,000%.

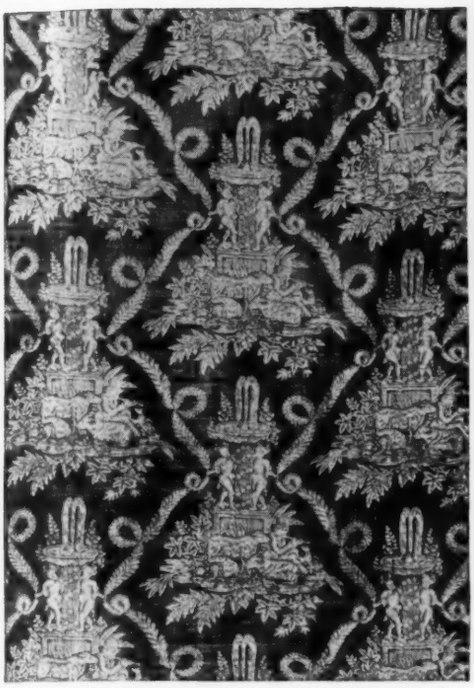
Under the tariff act of 1890 the imports of manufactures averaged $112,000,000 each year; Act of 1894, $147,000,000; Act of 1897, $142,000,000; Act of 1909, $178,000,000; Act of 1913, $237,000,000; Act of 1922, $318,000,000. The figures for total textile raw materials imported for the average year under each act are as follows: 1890, $59,000,000; 1894, $86,000,000; 1897, $117,000,000; 1909, $169,000,000; 1913, $465,000,000; 1922, 602,000,000; figures for latest act not representative.

Du Pont Agrees to Purchase Dyestuff And Chemical Business of Newport

THE E. I. du Pont de Nemours & Co. has entered into an agreement to purchase the dyestuffs and chemical business of the Newport Co., subject to the approval of the stockholders of the latter. The wood-distillates division of the Newport Co. does not figure in the transaction. The plants involved are at Carrolville, Wis., New Brunswick, N. J.; and Passaic, N. J.

It is the intention that this additional dyestuffs and organic chemical business shall be consolidated with the dyestuffs business of the purchasing company. Policies and operations of the acquired industries will be continued substantially as heretofore.

Newport has been an outstanding contributor to the upbuilding of the American dyestuffs industry. It began the production of intermediates at Carrolville in 1916, and in 1917 the company entered into the manufacture of dyestuffs. In 1918 Newport acquired the assets of the American Color Mfg. Co., Passaic, N. J., and in 1927, purchased the Rhodia Chemical Co., New Brunswick, N. J. In addition to dyestuffs, Newport manufactures a variety of intermediates and other chemicals.



Red and white reserve—"The Fountain" 18th century wood block.

Rare 18th century quilt. Medallion of Louis XVI. The heroic figure at the right holds a tablet on which are written the "Rights of Man."

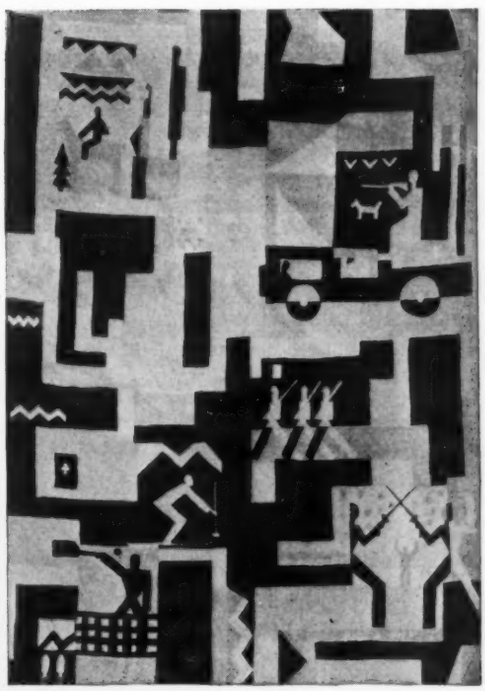
OLD *and* NEW *Prints*

These fabrics are from exhibitions held by W. & J. Sloane, New York: The old group from a special collection and the new from a modern all-American group of draperies.

Depicting the story of Jeanne d'Arc. Mauve and white print of 1815 signed by Jamet.

"The American Scene," monk's cloth curtains showing the activities of the artist's life in her home. Designed by Ruth Reeves

"Kitchen Print" for the kitchen of a country house. A contemporary interpretation of the familiar Normandy checks by Miss Reeves.



"Play Boy," designed for a trophy room in a country house. Motifs and colors were inspired by African shields.

Overseers' Round-Table

THIS department offers a new subject for discussion each week and gives readers' comments on problems introduced during previous weeks. The subject which was opened four weeks ago is closed this week and a summary of contributed ideas is given on opposite page

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Physical Examinations

Editor, Overseers' Round-Table:

IN THIS modern day, when all people are seeking to obtain greater efficiency, mills certainly should consider the physical condition of employees. The most satisfactory way to obtain definite knowledge of a person's health and ability to work is by means of a thorough physical examination.

Both the company and the employee would benefit. The company would know what type of person it was about to employ, the health status, and how much to expect. The company would know whether a man could stand heat, and how much, and could select a suitable job. Examining new employees and placing them where they can perform the best services would prevent the worker from becoming sick or hurt on the job, which would mean the mill caring for the worker in the hospital.

The employee, also, would profit. When he was examined the doctor could advise him how he might improve his physical condition. The worker will feel more like laboring for the mill and he would be in better condition to work regularly and efficiently.

All mills employ doctors and these doctors could conduct the examinations, therefore, the expense on the part of the mill would be negligible. J. E. G.

Editor, Overseers' Round-Table:

THE COMPANY should arrange for a physical examination for every new employee and, at the same time, provide for consultation with the company's doctor for any employees so desiring.

The method I have helped work out and put in effect at two different plants was economical yet very effective. A doctor was engaged to give one hour to examining new employees on two days a week, preferably Tuesday and Thursday, at a cost of about $50 to $70 per month. Hernia, weak heart, high blood pressure, eyesight, hearing and communicable diseases were the most closely watched for in both males and females. New employees started work immediately after being hired. Then the overseer and the employment clerk arranged for the new employees to be examined on the doctor's next visit. Not over fifteen minutes was lost by each new employee for examination.

During the latter part of the doctor's hour any employees desiring medical attention were taken care of, we even arranged for an appendicitis and a rupture operation during this doctor's hour. Tonsil operations were arranged for often.

There were three distinct economic gains in having a part time doctor for examining purposes and short consultations. First, the mill help found out about their physical ailments in time to have them corrected with a minimum of suffering and expense. Second the doctor increased his clientele by becoming the family doctor for many of our mill help. Third, our employees cost us very little in lost time due to chronic illness or being put on jobs for which they were physically unfitted. E. E. G.

Publicity For Bad Work

"I HEARD quite an interesting plan the other day," Superintendent Chase started the meeting off, "and I admit that I don't know what to think about it. Perhaps you men have some ideas on the subject, so here it is: In this mill I am talking about the inspection department reports to the superintendent any bad work; the superintendent calls in the overseer, or overseers, he believes to be responsible and it is decided where the trouble took place. So far this is just the same procedure as is followed in many mills, but this particular mill goes even further and, when the blame has been placed, a notice is put up on the bulletin board announcing that so much work has been spoiled and what department is to blame and why. Do you think there is anything in such a plan?"

"Absolutely not," Bill spoke heatedly. "I think that it is just about the worst plan I have heard of in a long time. It is bad enough to have work spoiled and any overseer feels low enough without plastering the story all over the plant. You can imagine how you would feel, and all your workers would feel, to have all the other departments gawking at the notices, and grinning at you, and making wise-cracks. As far as I'm concerned I know I'd get fighting mad. Now, you can't tell me that it does the company any good to have me and my department in that frame of mind. Lots of times things that go wrong in an overseer's department are beyond his control, but even if it is the overseer's own carelessness I think that such publicity would only cause trouble. No one likes to have his faults and errors told to the world. I think it is much better to have the super come to me and, if I've been at fault, cuss me out a bit in private. You can bet your life that I feel badly enough, but I know the super is just doing his job and I take the lesson to heart and try to keep out of trouble. By doing it this way I cooperate, but with this publicity stuff I'd just cuss."

"I think Bill is so het up he can see only one side," Pete came back. "For myself I can see a lot

...ork Is Discussed

of good in the plan. There is no question that publicity is a powerful weapon. Most bad work in a mill is caused by carelessness on the part of the overseer, or the operatives, and it is mightly hard to stop this carelessness. In cases where the bad work was caused by something outside the control of the overseer or operatives the notice on the bulletin board would say so and perhaps would lead someone to think of a way of preventing such occurrences. However, it is in cases where there has been carelessness that the plant would work best. As I said before, carelessness is pretty hard to wipe out and those who are most careless are those who pass off a private talking-to quite easily. It would be a different proposition, though, to pass off the fact that everyone in the plant knew you were careless. I'll admit that it is a real he-man way of handling bad work, but I think it is justified and I think it would be very effective in cutting down seconds. As for getting sore when your department was posted for spoiled work, well, when you make a mistake I think you should take your medicine, and you shouldn't kick as long as everyone gets the same treatment."

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Do *you* think that it would be a good plan to post notices on the bulletin boards telling about spoiled work and the cause?

Overseers and others are invited to discuss this and other questions brought up in the super's talks. Letters accepted and published will be paid for without regard to length. Brevity is desirable.

Editor, Overseers' Round-Table:

I do not consider that medical examinations for employees should be compulsory, except in the case of men who are engaged in work of a vital or dangerous nature. In certain cases I think it is most important that employment be given on condition that a doctor annually certifies the worker as being in a physical condition suitable to the nature of the work. This was especially impressed on me some years ago when a man at my works, who was employed as a driver of a travelling overhead crane, died during the lunch hour. Had this occurred when he was driving the crane it might have meant death to many working at their machines below.

No one cares for medical examinations and if these are obligatory it is only fair that they should be as free as possible from any unnecessary unpleasantness. I have seen as many as half a dozen men all in the doctor's office at one time in addition to the company's official. Every man should be given the same courtesy and privacy as would be given were he making an ordinary call for treatment. Men naturally resent being examined en masse and are not against comparing it with a veterinary surgeon finding the best animal for a customer.

I do not agree with compulsory medical inspections for those in ordinary occupations, but those firms which arrange for a physician to give an annual check-up to all those who wish to take advantage of it in a voluntary form are rendering their employees a great service which may mean the forestalling of serious illness. A. C. L.

Editor, Overseers' Round-Table:

I AGREE with Pete in regard to physical examinations not only for the employees but for second hands, overseers, and superintendents. You will have a much better grade of help. As soon as people know what any industry or manufacturing plant demands, they are going to get just that. In having these physical examinations, I can't see where it would discriminate, but rather help. Many of us think we are in perfectly good health, until we wake up to the fact that it is too late.

Why do all the leading insurance companies give free examinations to policy holders? Is this discriminating? Not at all. It is only rendering a service to mankind to help them to live a longer and more useful life.

In the case of the man with heart trouble, I fully believe that many a one is sleeping soundly in the grave who could be up and living if he had had a physical examination. This, as I see it, would serve a twofold purpose: First, it would help to prolong life, for if we know what is the matter with us we generally try to get well; second, it enables those for whom we work to place us in a position whereby we could render the greatest service. In other words, it would enable those whom we work for to take the square pegs out of the round holes. Whenever we reach this, I think labor troubles will cease.

One might say we could have our own examinations without any one else having anything to do with it. I ask the serious question: How many of us really do this? In my humble judgment it would be one of the greatest steps ever taken for the betterment of mankind.

W. W. MORRELL.
Roxboro Cotton Mills

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Summary of Discussion on Physical Examinations

By a vote in the proportion of eight to one the contributions favored physical examinations for all employees of a mill. It was stated that it was particularly important to check up on new employees and also that it would be beneficial for the old employees to have periodic examinations. The expense involved was believed to be negligible when compared with the benefits. Those objecting to the plan said that the expense would turn out to be greater than expected and the benefits less. Several letters suggested a modified plan which would cover only those performing work where any physical ailment would be a danger to themselves and others.

NEWS about MEN

John E. Edgerton, president of the National Association of Manufacturers, will deliver the principal address at the banquet meeting of the Louisiana Manufacturers Association, to be held Aug. 26 at New Orleans. Mr. Edgerton is also president of Lebanon (Tenn.) Woolen Mills.

James H. Craig, president of Somerset Mills, Inc., Roxboro, N. C., is transferring his headquarters from Philadelphia to New York. He will occupy offices with **H. C. Reid,** New York sales representative, at 43 Leonard St.

C. F. James, proprietor of the Elizabeth James Mills, Marion, N. C., has purchased all of the outstanding stock in the Etta Paper Box Factory, at Marion, which is not already held by Mrs. James or Mr. and Mrs. J. F. Wilkinson.

Emil J. Stehli, president of the Stehli Silks Corp., sailed aboard the Ile de France Aug. 1. This is Mr. Stehli's annual trip to Switzerland and he will probably return to this country about Oct. 1.

W. M. McLaurine, secretary of the American Cotton Manufacturers' Association, recently addressed a meeting of the Gastonia (N. C.) Civitan Club. He spoke about yarns and their systematic distribution. Mr. McLaurine, it was recently announced, will make an intensive survey of the textile plants in the south within the next two months. Upon completion of his tour of inspection, he states that he will have a thorough first-hand understanding of conditions under which southern plants are operating.

Nelson Barlow, who recently resigned as vice-president of the Slater Co., Inc., Webster, Mass., was tendered a farewell dinner by his former associates and presented with a wrist watch.

B. B. Gossett, vice-president and treasurer of the Gossett Mills, Anderson, S. C., gave 32 scholarships, on behalf of the company, to the Opportunity School at Clemson College, S. C.

Charles A. Root, treasurer of the Uxbridge (Mass.) Worsted Co., Inc., will be host for a ladies night of the Uxbridge Rotary Club at his estate Aug. 11.

Walter E. Schuster, treasurer of the Schuster Woolen Co., and the Hayward Woolen Co., both of East Douglas, Mass., has returned from a vacation at the Wild Goose Club, Harmony, Me.

H. S. Horrocks, secretary and treasurer of the H. Brinton Co., Philadelphia, has left for a trip through the Middle West. He will be gone about six weeks.

Charles J. Esterly of the Berkshire Knitting Mills, Reading, Pa., former congressman, has resigned as Republican county chairman of Berks County, Pa.

Charles J. Huber, manager of the product engineering division of Cheney Bros., has resigned from that position, to take effect Oct. 1. Mr. Huber has been with Cheney Bros. for the last four years in charge of their research and development work.

G. C. Kautz, manager of Paramount Textile Co., Chicago, Ill., is in the south visiting a number of textile manufacturing plants.

William M. Garrard, manager of the Staple Cotton Association of Greenwood, Miss., has just completed a visit to New Bedford for the purpose of renewing his many acquaintances there in the cotton market.

Frank Mellor is assistant general manager of production of Dominion Woolens & Worsteds, Ltd., whose plants are at Peterborough, Hespeler, Orillia and Milton, Ont. It was incorrectly reported that Mr. Mellor had become superintendent of the Peterborough unit.

George Brode is in charge of the Parker Hosiery Mills, Suffolk, Va., a recently opened branch of the Parker Hosiery & Dye Works, Portsmouth, Va.

H. S. Royle is reported to be interested in the organization of a mill at Millville, N. J., for the manufacture of tapestries, under the name of the Maurice River Textile Co. About 20 looms will be installed.

E. A. Franks, chairman weaver's division, S.T.A., who is now superintendent at Brookside Mills, Knoxville, Tenn.

A. W. Latta of Philadelphia, and **H. A. Florsheim** of New York, in addition to being district sales managers for the Textiles, Inc., Sales Co., have been elected vice-presidents of the company.

John J. McLeod, former superintendent of the Waterville (Que.) Woolen Mills, which were purchased by the Johnson Woolen Mills, Ltd., has resigned and is returning to Scotland. The new company is associated with Wilford & Johnson, Ltd., Leeds, Eng. **H. S. Harsfall** is the new superintendent of the Canadian company.

E. A. Franks, formerly superintendent of Dunean Mills, Greenville, S. C., has accepted a position as superintendent of Brookside Mills, Knoxville, Tenn. He succeeds L. H. Rice who recently resigned. Mr. Franks is chairman of the weavers' section of the Southern Textile Association.

Dr. Charles E. Mullin, head of the division of textile chemistry, rayon, and dyeing in the Clemson College (S. C.) Textile School, has applied for a year's leave of absence from the college. He will spend this time in consulting and commercial work. **Dr. H. L. Hunter,** who has been associated with Dr. Mullin for some time, will fill the vacancy in the faculty during his absence.

Elbert M. Shelton, head of the chemical department of Cheney Bros., will leave the firm Sept. 1. His resignation was announced last May.

Thomas W. Reilly has become associated with the Passaic (N. J.) Print Works, Inc., in a sales capacity, with headquarters at the company's New York office. Mr. Reilly has been identified with the Imperial Printing & Finishing Co., Providence, R. I., for the last eleven years. His first experience in the finishing business was with the Crystal Spring Bleaching & Dyeing Co., Thwaites, Mass., where he worked for four years.

Martin P. Glynn, Jr. is leaving the yarn department of Cannon Mills, Inc., Philadelphia. On Aug. 10 he will become a salesman for Wm. A. P. MacKnight, Philadelphia, who represents Rowan Cotton Mills Co., Salisbury, N. C., and who is also sole representative of the Swift Spinning Mills, Columbus, Ga.

W. L. Horne, who has been assistant superintendent of the Piedmont Weavers, and Burlington (N. C.) Mills, will also be assistant superintendent of the Sherwood Tapestry Mills which were recently established in Burlington.

A. G. Fant, formerly representative of the Portland (Ore.) Woolen Mills, has joined the selling force of the Pendleton (Ore.) Woolen Mills. He will cover Michigan, Indiana and Ohio, with headquarters in Springfield, Ohio.

R. R. Davenport was recently appointed head of the Western office of the Walter Fred Hosiery Mills, Nashville, Tenn. His headquarters are at Los Angeles, Calif.

A. F. Dundon, Troy, N. Y., will cover the Albany territory for the Russell Mfg. Co., Middletown, Conn.

W. M. McLaurine, who will soon make survey of southern textile plants

Frank Burns, head dyer on the night shift for the last three years at the National Spun Silk Mill, New Bedford, Mass., has resigned his position and will return to his home in Paterson, N. J.

R. O. Vixtrum will cover the Los Angeles beach district for the Russell Mfg. Co., Middletown, Conn., according to announcement by **R. W. Conroy,** Pacific Coast division manager of the company.

Harry J. Meyers, Los Angeles, Calif., representative of the Pendleton (Ore.) Woolen Mills, has opened new offices at 730 South Los Angeles St.

Clarence S. Ball, a foreman of the Whitin Machine Works, Whitinsville, Mass., has been appointed an assessor of the town of Northbridge, Mass.

A. T. Quantz, a graduate of the Textile School of North Carolina State College, has been transferred from the Burlington (N. C.) Mills to the Pinehurst Silk Mills at Hemp, N. C., where he has charge of the supply room.

P. B. Moore has resigned as overseer of weaving at the Monroe, N. C. plant of Manetta Mills. He will be succeeded by **H. H. Brown** of Raleigh, N. C.

Thomas Campbell, master mechanic for the Paul Whitin Mfg. Co., Northbridge, Mass., and Gertrude Gilbert were married in Worcester, Mass., July 25.

Charles E. Mullin who has applied for a year's leave of absence from Clemson College

Robert Swan is overseer of finishing at Geneva Mill of the Wanskuck Co., Providence, R. I. He was formerly superintendent of finishing, Shireffs Mills of Aetna Mills, Fitchburg, Mass.

Business Literature

Chemicals. Use of carob-seed gum for detection and estimation of boric acid and borates explained in analysis by Ralph Hart, of Hart Products Co., New York City, in booklet issued by American Chemical Society.

Belt Conveyors. Link-Belt Co., Chicago. Selection and application of proper type of belt conveyor for handling any material in quantities desired, is described in 176-page data book.

Drying Equipment. James Hunter Machine Co., North Adams, Mass. Current issue of "Hunter Counselor" discusses new developments in drying equipment and such textile questions as design piracy and mothproofing.

Castings. Wm. J. Sweet Foundry Co., Newark, N. J. New edition of Sweetaloy castings chart covers this firm's complete range of chrome-iron and chrome-nickel-iron alloys for corrosion and heat resistance, giving up-to-date information on applications of each.

Pulleys and Hangers. The American Pulley Co., Philadelphia, Pa. Complete up-to-date catalog, bound in heavy paper, giving firm's entire line of pulleys, shaft hangers, hand trucks, reels, spools, beams, and miscellaneous stampings.

Drives. H. W. Caldwell & Son Co., Chicago. Booklet has illustrations and text describing screw conveyor drives, their installation and data on how to select drives for special purposes.

Water Supply. Solomon, Norcross & Keis, Atlanta, Ga. Installation of new water supply system at Fort Lauderdale, Fla., described in article by F. J. Keis, of above firm.

Screws. Standard Pressed Steel Co., Jenkintown, Pa. Catalog giving all specifications of firm's line of "Unbrako" screws.

Chemicals. J. Bishop & Co. Platinum Works, Malvern, Pa. Application of the metal Tantalum to industrial uses, and its characteristics and properties are presented in booklet.

Cotton and Cotton Wastes. Wonalancet Co., Boston. Advantages of Wonalancet cotton and cotton waste described in booklet also containing article on business philosophy.

Industrial and Technical Paints. Thompson & Co., Pittsburgh, Pa. Booklet "Diamond Points" tells uses of firm's line of linseed oil, turpentine, white lead, varnishes and brushes; and describes servicing policy.

Steam Checking. Brown Instrument Co., Philadelphia. Folder tells uses and advantages of Brown Electric Flow Meter, equipped with automatic planimeter.

Induction Motors. Reliance Electric & Engineering Co., Cleveland, O. Illustrated booklet carries articles and specifications relating to Reliance enclosed fan-cooled induction motors, Type AA, Form F, with ball bearings for two- and three-phase a.c. circuits.

Boiler Scale Elimination. The Griscom-Russell Co., New York City. Functions, applications and advantages of evaporators for distilling boiler-feed make-up water, discussed in detail in illustrated 35-page booklet.

Clay Products. Laclede-Christy Clay Products Co., St. Louis, Mo. Folder discusses "the right fire brick in the right place."

Ash Conveying. United Conveyor Corp., Chicago, Ill. Exposition of services and advantages of the Steamatic ash conveying system.

Lubrication. Alemite Corp., Chicago, Ill. Explanation of industrial Alemite lubrication and how to solve various bearing problems.

Motor Trucks. General Motors Truck Co., Pontiac, Mich. Analysis of returns sent to truck owners nationally Sept. 18, 1929, by this company, giving details of trucks used and service given by various industries.

V-Belt Drive. Pyott Foundry Co., Chicago, Ill. Folders outlining advantages of V-belt drive.

Office Equipment. Harding Carpets, Ltd., Brantford, Ont. Illustrated list of representative Harding carpets, including rugs for office use; also second booklet showing illustrations of carpets in color.

Valves. Crane Co., Chicago and New York. Uses and value of Crane products are discussed in current issue of firm's house organ, "Valves."

Specifications. U. S. Bureau of Standards, U. S. Department of Commerce, Washington, D. C. Alphabetical index and numerical list of federal specifications promulgated by the Federal Specifications Board.

Fulling Mills. James Hunter Machine Co., North Adams, Mass. "Hunter Counsellor" announces new smaller Hunter Fulling mill Model 25, which is declared to have all advantages of model 30, with two-page illustration of new unit. Also discussion of new wool scouring and drying unit.

Textile Calendar

Carolina Yarn Association, Second Annual Golf Tournament and Outing. (Place to be announced later.) Sept. 18 and 19, 1931.

National Association of Cotton Manufacturers, Annual Meeting, Providence-Biltmore Hotel, Providence, R. I., Oct. 7 and 8, 1931.

Silk Industry Week, Paterson, N. J., Nov. 14 to 21, 1931, including Silk Machinery Exposition, Nov. 14 to 21; National Silk Convention, Nov. 18 and 19; Paterson Silk Institute, Nov. 14.

American Association of Textile Chemists and Colorists, Annual Meeting, Boston, Mass., Dec. 4 and 5, 1931.

Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 17 to 22, 1932.

NEWS about MILLS

Cotton

Anniston (Ala.) Mfg. Co. is installing 25 Model X 40-inch looms, made by the Draper Corp., Hopedale, Mass. The Anniston company will also install two Universal No. 40 winders, and two high-speed warpers made by the Saco-Lowell Shops.

Goodyear Tire & Rubber Co., Gadsden, Ala., had its annual picnic and outing at East Lake Park, Birmingham, Ala., on Aug. 1.

Margaret Mill, Huntsville, Ala., oldest cotton mill establishment in that town, is being offered at public sale under mortgage foreclosure proceedings. The date of the sale is set for Aug. 31. The mill employs about 200 people and has been in operation during the last several months under the management of Walter M. Wellman. Shelby S. Fletcher and Robert E. Spragins have been financially interested in the enterprise for many years. The property to be sold includes the mill plant and warehouses, and a mill village composed of a large number of dwellings.

West Boylston Co., Easthampton, Mass. The auction of machinery and equipment on July 29 resulted in sales totaling approximately $50,000. Several items were withheld from the sale for shipment to the company's Montgomery, Ala., mill.

Fisher Mfg. Co., Inc., Fisherville, Mass., has given to the town of North Grafton, Mass., land on which the town will build a new library.

Hathaway Mfg. Co., New Bedford, Mass., held its annual clambake and outing Aug. 1. A baseball game followed the clambake and the card room won from the warp twisters, 7 to 3. James E. Stanton, Jr., treasurer of the mill, donated the prizes and John Robinson was chairman of the committee in charge of arrangements.

Belmont (N. C.) Fabric Co., capitalized at $350,000, was placed in the hands of a receiver by order of Superior Court Judge Michael Schenck on July 15. D. P. Stowe, secretary-treasurer of **Perfection Spinning Co.,** Belmont, was named receiver of the Belmont Fabric Co.

***Hampton Textiles, Inc.,** Gastonia, N. C., recently organized by **Textiles, Inc.,** and the **Hampton Co.,** Easthampton, Mass., have awarded a contract to the Walker Engineering Co., Gastonia. The work to be done includes remodeling and rearranging the interior of the Priscilla plant which will accommodate yarn mercerizing and finishing equipment. J. W. Walker, president and general manager of the engineering firm, stated that 60 days or more will be required to complete the project. In the meantime, gray yarns from the spinning mills of Textiles, Inc., will be mercerized and finished by the Hampton Co., Easthampton, Mass., and sold through **Textiles, Inc. Sales Co.,** of Gastonia, N. C.

Cannon Mills Co., Kannapolis, N. C. Fire of an undetermined origin caused considerable damage to the Gibson and Hobarton units of Cannon Mills Co., July 24. While the fire was being fought on the second floor of the Gibson mill, an alarm was turned in from the Hobarton plant which was being used only for the storage of cotton. An estimate of the damage has not been made but it is understood that the property was covered by insurance.

Carolina Cotton & Woolen Mills Co., Fieldale, Va. The local plant closed Aug. 1 for its annual vacation. Operations will be resumed Aug. 17.

Dominion Textile Co., Ltd., Montreal, Que., has reelected the 1930 board of directors. Sir Chas. Gordon is chairman.

**Indicates previous mention of project.*

Wool

Saranac Mills, Blackstone, Mass., operated by the American Woolen Co., have resumed operations in practically all departments, following a shut-down for almost a year.

Thayer Woolen Co., North Oxford, Mass., has resumed operations at its Lancaster mill on a full-time schedule, with the carding department running nights.

Botany Worsted Mills, Passaic, N. J., have received a reduction of $1,000,000 in tax valuation. The reduction is a little more than half the amount sought by the concern; it will lower the total assessed value to $5,274,000.

Oregon City (Ore.) Mfg. Co., plans to open a New York office in the near future, with R. C. French as its manager.

Pendleton (Ore.) Woolen Mills, have a contract for 4,000 yellowstone blankets to be used at the 1932 Olympic games to be held at Los Angeles.

James Lees Sons & Co., Bridgeport, Pa., worsted yarn spinners, had plans prepared for alterations and additions to the plant. The plans include the erection of a two-story addition, 32x10 ft., to building No. 7 which is five stories high. The addition will be of reinforced concrete, steel sash, and brick walls, with provision for three more stories. The present boiler house, 51x63 ft., will be increased in height to accommodate new equipment. A new shipping platform of timber construction, 20x22 ft., will also be built.

Atlantic Mills, Providence, R. I., have filed claim for a refund of taxes, amounting to $137,005, in the United States court of claims. The claim is on returns made by the mills for the year 1918.

Uxbridge Worsted Co., Inc. The Woonsocket, R. I., plant is running on a daily three-shift basis, with a full quota of workers.

Gay Bros. Co., Cavendish, Vt., is running on a full-time production basis with regular working quota and will continue on that schedule for an indefinite period.

Angora Industries, Inc., Snohomish County, Washington, will sell its output of Angora rabbit wool to Weber & Barkin, wool manufacturers of New York, according to E. S. Payne, treasurer of Angora Industries, Inc. The company had previously located a market for the wool in Ireland, but when the New York firm examined samples of the product, they saw the possibilities of using the wool for the manufacture of certain grades of tweeds.

Knit

Massachusetts Knitting Mills Corp., Boston, Mass., recently organized with a capital of 1,000 shares of stock, no par value, will take over and succeed the Massachusetts Knitting Mills.

Campbell Silk Hosiery Mills, Lambertville, N. J. H. V. D. Moore of Trenton, N. J., and James L. Rankin of Chester, Pa., have been appointed receivers for this company. Liabilities are stated at $70,000, and assets in excess of that amount. Stockholders and creditors have agreed to a continuance of operations under the receivership.

***McPar Hosiery Mills,** Marion, S. C., are now occupying their new brick extension.

Clyde Mills, Inc., Newton, N. C. A foreclosure sale has been ordered by Judge Webb, of the federal court, to be held in Newton, Sept. 4. The sale is to satisfy a bonded indebtedness of $600,000. The court's order specifies that no bid will be considered of less than $155,000 cash, or $175,000 in bonds. Clyde Mills, Inc. own and operate textile plants at both Newton and Troy, N. C., but only the Newton mills are involved in the litigation, which is part of proceedings begun by the Midland Trust Co. of New York, trustee for investors in the property.

Yarnette Knitting Mills, Inc., Philadelphia, Pa., recently organized with a capital of 200 shares of stock, no par value, to operate a local mill, will be headed by Max Sononfeld, 1517 North Bouvier St., Philadelphia. Max Brateman, 6212 Catharine St., Philadelphia, will also be an official of the new company.

Aurora Silk Hosiery Co., South Langhorne, Pa., has leased a portion of its mill to Joseph MacKay of Philadelphia, who will engage in the manufacture of carpets it is reported.

Parker **Hosiery Mills**, Suffoik, Va., have opened their new plant at the corner of Factory and Adams Sts. This company is a branch of **Parker Hosiery & Dye Works**, Portsmouth, Va.

*Richmond **Hosiery Co.**, 389 Richmond Street, London, Ont., has let a contract for structural steel to the London Structural Steel Co. Plans call for one story, 35x65 ft., to cost approximately $10,000.

Silk

Shawmut Weaving Co., a concern recently organized at Taunton, Mass., has increased its number of looms from 128 to 180. The company will work on gray goods only. It is controlled by the Baltic Yarn Co., New York.

Otleo Silks, Inc., Paterson, N. J., recently organized with a capital of 2,500 shares of stock, no par value, to operate a local silk mill, will be represented by Harry Nadell, attorney, 45 Church St., Paterson. The company is headed by Otto Dietz and Paul Fox.

Wohl Silk Co., Paterson, N. J., recently organized with a capital of 1,200 shares of stock, no par value, to operate a local mill, will be represented by Surosky & Surosky, attorneys at 45 Church St., Paterson. The principal incorporators are Alexander Josephson and Jacob L. Abramowitz.

*Indicates previous mention of project.

Berwick (Pa.) Silk Corp. has been organized with a capital of $10,000, to operate a local broadsilk mill. The company will be represented by A. Ansbach, 221 South Eighth St., Berwick.

Universal Industrial Corp., Danville, Pa., commission throwsters, moved its New York office to 1450 Broadway on Aug. 1.

Rayon

Du Pont Rayon Co., Buffalo, N. Y., is increasing its working force about 25%. The mill has been placed on a five-day week for all piece-work operatives, with hourly wage rates remaining unchanged.

American Glanzstoff Corp., Elizabethton, Tenn., is running on a three-shift day schedule at its local mills and will hold to that basis for an unlimited period.

Finishing

***Burlington (N. C.) Dyeing & Finishing Co.** has leased the Webb Ave. plant of the Aurora Mills, Burlington, N. C., which is now being remodeled. Work was started last week by S. J. T. Lutterloh, a local contractor.

Erie Dyeing & Processing Co., Cleveland, Ohio. A two-story addition, 60x156 ft., is being constructed, costing $25,000, on premises adjoining the main plant. This addition will take care of the extra business produced by the new department, which will be devoted to the printing of woolen, worsted, rayon, cotton and mercerized yarns.

Cooper-Kenworthy, Inc., Providence, R. I., have arranged for a reduction in capitalization from $500,000 and 5,000 shares of stock, no par value, to $326,500 and 5,000 shares of stock, no par value.

Miscellaneous

***Sterling Shoe Fiber Co., Inc.**, Coventry, Conn., has incorporated to manufacture cotton, silk, imitation leather and all kinds of paper products, with an authorized capital of $50,000. The incorporators are: R. W. Hinman, Willimantic; J. M. Allen, Coventry; John Russell and Andrew Porter.

Certified Bedding, Inc., Boston, Mass., recently organized with a capital of 250 shares of stock, no par value, to operate a local factory, will be headed by William Boogman, 82 Ormond St., Dorchester, Boston, who will be treasurer.

New Books

MANAGEMENT PROBLEMS, With Special Reference to the Cotton Textile Industry; Edited by G. T. Schwenning, Chapel Hill, N. C.; University of North Carolina Press; $2.00.

A series of addresses on selected problems of management were delivered by specialists at the University of North Carolina during the academic year 1929-1930; with the aim of making the papers available permanently to students and business executives, Mr. Schwenning now presents them in book form. The subjects were divided into three groups: textile problems, personnel problems and a third miscellaneous group of selected problems. The lecturers included Henry P. Kendall, president of the Kendall Co., of Boston, and numerous educators who are authorities on economics. Mr. Kendall's address is one of the most interesting in the volume; he analyzes management problems which confronted his company in the early days, and tells how they were solved. Mr. Kendall stresses machinery maintenance, up-to-date equipment, personnel relations, and concludes by urging cooperative action in the industry toward settlement of such problems as long hours, and employment for women and minors for night work which he points out cannot be solved by individual companies.

WOOL YEAR BOOK 1931; Manchester, England; *Textile Mercury;* Price 7 sh. and 6d.

This standard British wool annual makes its twenty-third appearance in a year of doubtful business. It is featured by numerous new divisions and by the expansion of several others, making the volume an up-to-date reference work on the British wool industry. In his preface, the editor expresses the hope that 1931 will be marked by a turn for the better in industry, but strongly counsels caution as trade policy. He points out that developments in production methods have necessitated remodeling of this part of the book; he adds "Machinery makers have spared nothing in their efforts to provide machinery designed for improved quality, increased output and lower production costs." The book covers its usual broad field of raw materials, yarns, fabrics and finished products such as hosiery, etc.

FOREIGN TRADE: With Special Reference to the Cotton Trade; By Gilbert Beard; Manchester, England: John Heywood, Ltd. Price 7d.

With foreign trade possibly the major economic question confronting Great Britain, Mr. Beard's thoughtful study, embodied in this 82-page pamphlet, should find eager readers there; the work also has pertinent interest for American industrialists, as the chapter on the British cotton situation has direct bearing on our exports. In considering cotton, Mr. Beard pays particular attention to the labor and social aspects, as regards their relation to the industry itself. He offers this comment: "Lancastershire costs are too high. Trade union wages and monopolistic profits are mostly responsible for the present excessive costs."

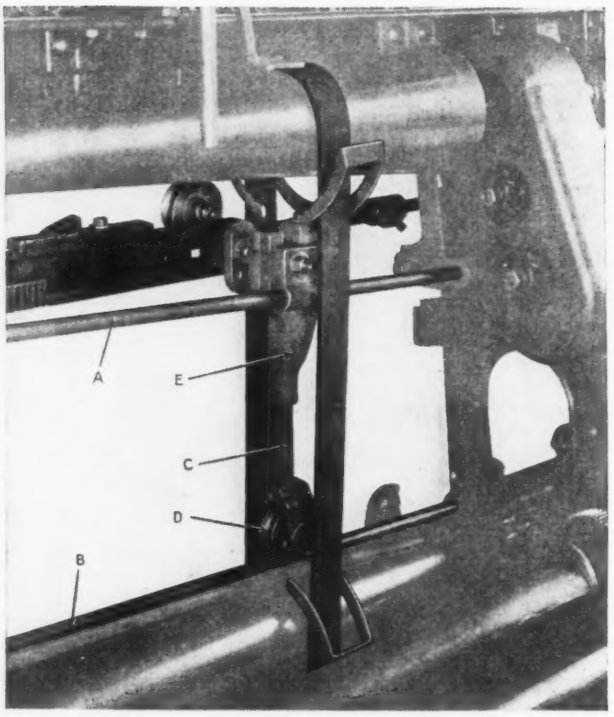
COTTON YEAR BOOK 1931. Compiled by Editor of *Textile Mercury*. 41 Spring Gardens, Manchester, Eng. Price 7 shillings and 6 pence.

The 26th issue of this standard British reference book, opens with a comment regarding Lancashire's prospects of surviving the present serious depression. The editorial preface observes that the volume makes its appearance coincident with "the heaviest period of depression that the industry has had to bear since the beginning of the century." The volume gives a comprehensive picture of the year's progress in technical development. The usual format is retained and the leading divisions include: Weaving, doubling, bleaching, dyeing, spinning, stitching and carding. Ventilation is given considerable attention, and the chapter on artificial silk, which has been expanded, will be of particular interest to American rayon producers.

PATENTS, TRADE MARKS, COPYRIGHTS—LAW AND PRACTICE, by Oscar A. Geier, 128 pages, Richards & Geier, Patent and Trade Mark Attorneys, 274 Madison Ave., New York.

This book is written in terms the business man can understand, and covers the essential features of our patent, trademark, and copyright laws. The patent-law section of the book explains who may obtain a patent, what may be patented, the importance of specifications aid claims, patent interference, reissues, appeals, infringement suits, etc. The trademark end of the book covers trademarks in general, valid trademarks, invalid trademarks, unfair competition, state registration, interference, oppositions, appeals, infringements, etc. In addition to the facts about American patents and trademarks, this book also gives a large amount of information about the foreign patents and trademarks which will be of particular interest to manufacturers who export. Interested parties may secure a free copy of this book upon application to the publishers.

New Machinery *and* Processes



Guide insures positive and rapid shifting

Positive-Acting Cone-Belt Guide

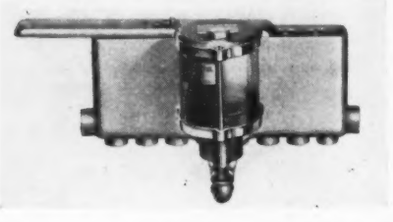
A CONE-BELT guide which insures rapid and positive shifting of the belt has been announced by Saco-Lowell Shops, 147 Milk St., Boston.

By means of this device the guide which shifts the belt is kept at a constant distance from the surface of the cone. The shifter assembly is carried on the rod *a* (see illustration), which is supported by the sampsons of the frame. This rod is in a horizontal position. Between the same sampsons the rod *b* is placed in a position parallel to the contour of the bottom cone, so that the distance from this rod to the face of the cone is the same throughout its entire length. The shaft *c*, carrying the grooved wheel *d*, is free to slide up and down in the housing *e*. The top belt-shifter is adjustable by means of the cap screw and slot *h*. The whole mechanism effects a refinement of roving which is especially applicable to the production of fine hanks. This construction is now standard on all new roving frames manufactured by the company and may be applied to existing frames at a nominal cost. It is expected that the device will find extensive application, especially on fine frames where even a slight lag in belt shifting may cause uneven roving.

Adjustable-Wick Oil Feed

FOR supplying oil to various types of bearings, the Daun-Walter Co., Milwaukee, Wis., has developed an adjustable-wick oil-feed unit which controls the amount of oil delivered from a reserve supply of from one-half pint to two gallons. The system of lubrication is without moving parts and provides a positive, continuous control over the quantity of oil fed each bearing; and a glance is sufficient to check the oil supply for a group of bearings.

The device, as shown in the accompanying illustration consists of two essential elements; the constant-level oil control, shown in front, which provides an adequate storage of oil and maintains a constant level in the wick chamber; and the adjustable-wick oil-feed multiple unit or wick box. The wick box is of cast aluminum with a removable cover and is made in four-, eight-, and twelve-outlet units providing lubrication for a like number of bearings. The horizontal outlets on either end of the box permit the hooking up of other wick units when located on the same level. Another feature is the provision made for adjusting the height of the turn-down of each wick loop, which determines the quantity of oil fed by the wick, the level of the oil in the wick chamber being permanently stationary. A minimum as low as four drops per hour can be maintained continuously. Capillary action draws the oil up over the loop against the action of the constant force of gravity so that the higher the loop is raised the less oil will be fed, and vice versa. This manner of using a wick prevents the possibility of clogging or carrying over any solid foreign matter to the bearings.



A minimum of four drops per hour may be maintained with this oil feed

Instrument for Measuring Fiber Diameter

AN IMPROVED eriometer for measuring fiber diameters has been developed recently at the U. S. Bureau of Standards, Washington, D. C. This instrument provides a means of determining the average diameter of a group of fibers by the diffraction method. Since the average diameter of wool fiber is a dominent dimensional characteristic of the material which serves as the present basis for the classification into grades, it is believed that the eriometer will be of value in grading wool and studying other textile fibers.

The instrument consists of an upright observation tube at the lower end of which is a rectangular slit approximately 1 mm. wide and 15 mm. long. This slit is illuminated through a ground-glass diffusion screen by four 10-watt Mazda lamps mounted in a white-lined box which forms the base of the instrument. The narrow illuminated slit serves as a uniform line-source of light for observing the diffraction phenomena.

At the top of the tube is a circular aperture 6 mm. in diameter over which a group of 15 to 20 fibers may be mounted and arranged approximately parallel to the slit. To assist in this

adjustment, the sample holder rotated about the axis of the observation tube.

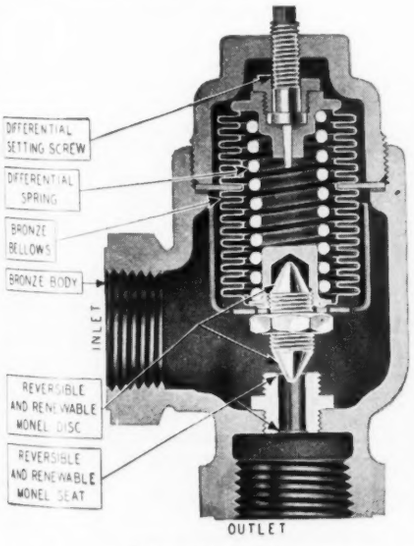
Looking through the fibers at the illuminated slit, one sees a series of bright diffraction bands separated by narrow darker intervals. These bands are arranged parallel to the illuminated slit and are extended laterally and symmetrically on both sides. The distance from the center of the bright slit to the first dark band on either side, is—to a close approximation—inversely proportional to the average projected diameter of the fibers.

Improved eriometer determines average diameter of fibers by diffraction method

For the purpose of measuring this distance the slit is actually made up in three parts. By means of a screw of known pitch, the short outer parts of the slit (approximately 1 mm. in length) may be displaced, simultaneously and laterally, relative to the central stationary part, until they are lined up with the center of the first dark band. This displacement, or its reciprocal value, is then read directly from a spiral scale on the drum.

In a study of the performance of the instrument, diameter measurements have been made with the eriometer and with a microscope on wool and other textile fibers.

Within the range of applicability of the instrument, it was found that the precision and accuracy obtainable is quiet sufficient for the intended purpose. The eriometer averages for the samples studied all fall within 2 microns of the corresponding values obtained by averaging many individual determinations with the microscope.

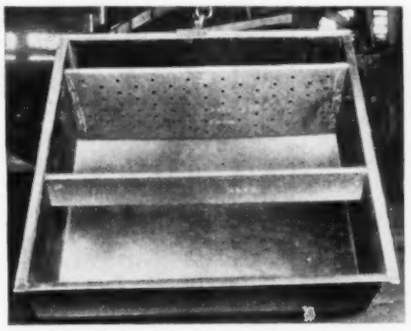


Differential-setting steam trap

Nickel-Clad Steel Plate

NICKEL-CLAD steel plate, a hot-rolled plate made up of a layer of pure, solid nickel and a heavier layer of high-grade flange steel, has been announced recently by Lukens Steel Co., Coatesville, Pa. The product is available in all sizes of plates ⅜ in. thick and heavier, and in two grades in which the solid nickel is 10% or 20% of the thickness of the nickel-clad steel plate. It is stated that, since in the hot-rolling process the pure nickel is actually bonded to the steel, all the advantages of pure, solid nickel are available in this product, and that it makes practical those heavy plate construction jobs where both corrosion-resistance of the equipment and non-contamination of the product are desired.

An application in the textile industry where nickel-clad steel plate is believed to be of particular advantage is in the construction of larger dyeing machines, including vacuum or pressure types. It is also considered advantageous for the



Tank of nickel-clad steel plate for large reel-type dyeing machine. Baffle plates of monel metal

construction of kiers for boiling out of cotton and for peroxide bleaching. Other uses of nickel-clad steel plate are in the fabrication of tanks, piping of large diameter, evaporator bodies, and similar equipment where it is impractical or uneconomical to employ pure nickel.

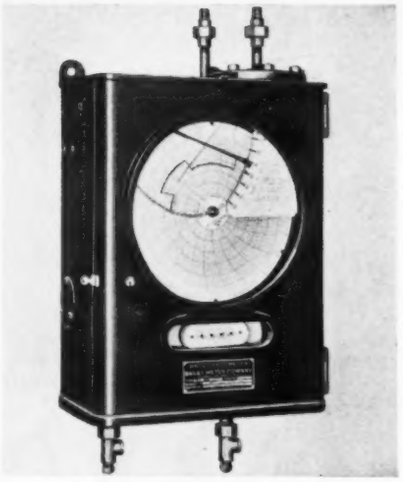
Differential Steam Trap

DEVELOPMENT of a differential-setting steam trap, which is claimed to have many advantages over existing types, has been announced by C. J. Tagliabue Mfg. Co., Brooklyn, N. Y.

The differential-setting feature makes it possible for the trap to discharge condensate at a temperature corresponding to a uniform differential pressure from 0 to 20 lb. below the operating steam pressure. It is said that if the trap is set to discharge condensate at a temperature corresponding to as much as 20 lb. less than the operating steam pressure, it will discharge at this differential regardless of the magnitude of the steam pressure and without any further adjustment of the setting.

The degree of temperature at which the trap will close is determined by the amount of mechanical pressure exerted by the spring. This, in turn, is controlled by the setting of the screw located on top of the trap.

Seats and disks are of Monel metal and are reversible so that when one side becomes worn they may be inverted. The body and bellows are of bronze.



Instrument for controlling combustion ratio

Combustion Ratio Meter

MAINTENANCE of a definite relationship between the amounts of air and fuel supplied for combustion purposes is facilitated through the introduction, by the Bailey Meter Co., Cleveland, of the Bailey Ratio Meter.

The primary purpose of this instrument, according to the manufacturers, is to provide oil- or gas-furnace operators with an easily understandable guide which will enable them to maintain proper combustion control.

The meter contains two recording pens, one of which is actuated by the air flow while the other records the flow of fuel.

Before the instrument is installed, a combustion test is run on the furnace to determine what ratio between air-flow and fuel-flow corresponds to best combustion conditions. The mechanism is then adjusted so that this ratio is always obtained when the two records coincide. It is said, therefore, that the operator merely has to keep the two pens together by proper manipulation of the air supply to be assured that maximum economy is being obtained.

The instrument may also be used as a fluid meter on the combustion line. The manufacturer states that it will record and indicate the rate of flow in any convenient terms, and that the total flow may be given by the four-dial integrator, which is optional.

Another advantage claimed for the device is that it is so constructed that it is possible to install auxiliary recorders of temperature or pressure which will make records on the same chart.

This is convenient in making comparisons of related factors.

Durene

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Representatives in all principal countries of the world

TEXTILE WORLD ANALYST

Enormous Supply of Cotton Has Depressing Effect

By Dr. L. H. Haney

ON A trip through the Southeast recently made by the writer, he was impressed by the generally good condition of the cotton crop. A bumper crop is promised in the Mississippi valley and Arkansas. While there was considerable talk of the weevil, this pest at no place seemed to be taken very seriously, and the crop was making rapid headway. Altogether there seems to be no reason yet to make any estimate of less than 13,000,000 bales, the present outlook being for a considerably larger crop than that.

The cotton crop this year will be made with an unusually small expense. Probably the larger part will not cost over $6 per acre. As the prospect is that, outside of Texas, a large part of the acreage will yield as much as half a bale, it can be readily figured that the cash outlay for making much of the cotton (perhaps as much as 50%) will run between 2 and 3c. per lb. Of course, this does not allow for interest and taxes. If we allow the rather high charge of $12 an acre to cover these items, however, we arrive at an estimate of total cost of between 5 and 6c. per lb. which would apply in the heavy producing section. To the extent that the yield is better than half a bale to the acre, the cost per pound will be even less. (Seed this year will probably not pay for the cost of picking and ginning, however, so that perhaps the 6c. figure should be favored.)

The low expense of producing the crop is an encouraging factor concerning the economic position of the South and the possibility of the beginning of improvement this year, but it suggests that resistance on the part of the farmers to some further decline in cotton prices may not be as strong as might be supposed. It should be noted that the foregoing figures are not to be applied to all sections. They are very rough, and do not apply to low-yield, high-cost areas. The quantity of cotton to which the figures apply, however, is probably sufficient to be an element of weakness.

Moreover, the debts of the cotton farmers are so large and the attitude of the banks toward credit is so strict, that the tendency to hold cotton by the farmers is not likely to be strong. And the position of the cooperatives hardly favors much additional support.

The writer found an unusually widespread feeling of uncertainty as to business in general and the cotton business in particular. The general tendency was to lean toward bearishness. The large stocks of cotton are the chief factor in the uncertainty—especially the large holdings of the government and the cooperatives.

Bull Points

1. The crop continues a little late, and much showery weather is good for weevils, which pests have done some damage in south Texas and show considerable infestation in various sections, such as parts of Mississippi and South Carolina.

2. Some doubt about yields in the Southeast, because little fertilizer has been used.

3. Exports to the Orient have been large this year, Japan and China taking less India cotton; silver exchange stronger.

4. The textile strike in northern France seems near settlement.

5. Domestic mills have low supplies of raw cotton.

6. Stocks of carded sales yarns decreased again in May.

7. The fine goods situation shows some improvement, as forced liquidation is completed and better control over production is developing.

8. Stocks of standard cloth and finished goods much reduced; wholesale dry goods inventories low.

9. Tire fabric consumption increases; some improvement in demand for knitting yarns.

10. More cotton dresses and men's cotton suits being worn.

11. Cotton is cheap compared with wool.

12. The general bearish sentiment is likely to bring recurrent over-sold conditions; a large speculative short interest.

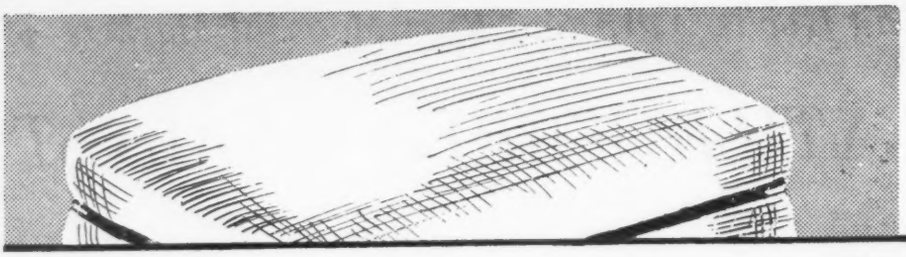
Bear Points

1. An enormous carryover is definitely established—over 6,000,000 bales of all cotton in the United States and over 9,000,000 bales of American cotton in the world.

2. The condition of the crop averages good, with ample moisture in most sections and recent rapid progress making gains on the weevil; fertilizer not much

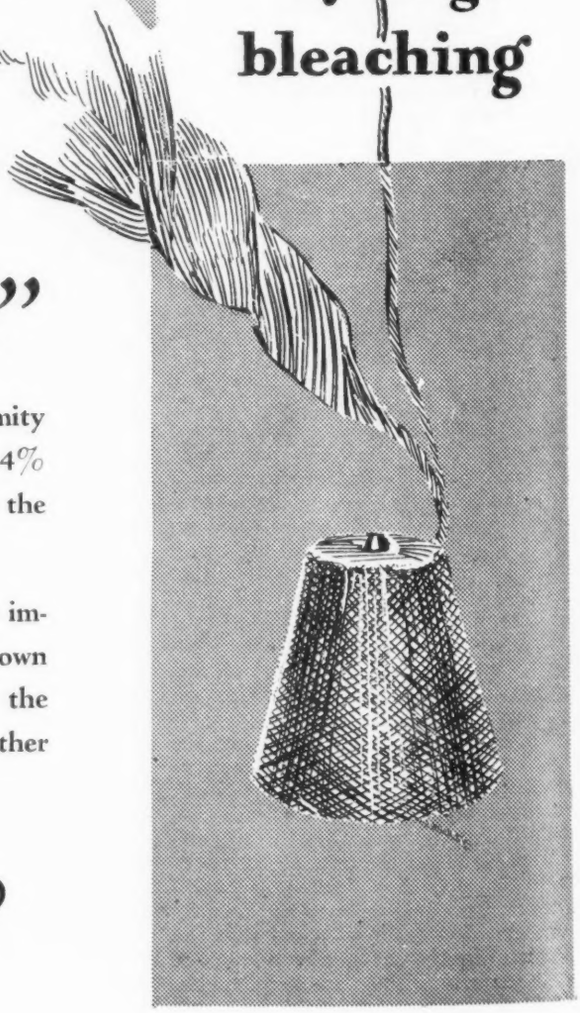
Summary: **The problem of the cotton textile industry is to adjust itself to the task of dealing with the enormous supply of cotton. This means lower raw cotton, and an adjustment of textile production to allow a decent replacement margin. As soon as the increased supply is discounted, prices will stabilize, demand will be stimulated, and we will find that money can be made by manufacturing cheap cotton as well as when prices are high.**

The analysis and forecast by Dr. Lewis H. Haney, director, New York University, Business Research Bureau, which regularly appears on this page, considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.



"From the cottonfields . . .

through spinning, gassing, mercerizing, pre-shrinking, dyeing, bleaching



—direct to you"

On a recent survey of yarn Buyers, 40% chose Uniformity as the most important factor in the buying of yarn, 34% chose Running Qualities, 15% chose Reputation of the Seller, and only 5% chose Price.

We have always considered Uniformity as the most important factor and have therefore established our own spinning mills where we are able to control not only the mercerizing but the spinning as well, giving you further assurance of a uniform yarn at all times.

BOGER & CRAWFORD

J and E. Venango Sts.
Philadelphia, Pa.

of a factor this year except where washing is bad.

3. The increase in exports has probably represented much consigned cotton; the total for the season is only a trifle above last season's *very low* figure.

4. Exports appear to have exceeded foreign spinners' takings, and foreign stocks of American cotton are large; stocks at Bremen are considerably above a year ago and at Havre are about double last year's figure.

5. Domestic stocks in public storage are very large, both absolutely and compared with domestic mill consumption; port stocks very large.

6. Reports from Bremen, Liverpool, and Manchester are unfavorable and the Indian piece goods market shows no improvement, efforts to re-export being reported.

7. Domestic mill consumption declined more than seasonally in June.

8. Manufacturers face further curtailment, as demand for goods falls off with reactions in raw cotton prices; very little forward buying.

9. Yarn markets very dull, showing little if any independent strength; supplies ample despite curtailment.

10. Shipments and unfilled orders of pyroxylin coated fabrics declined in June.

11. The "basis" (on October futures) has declined.

1. Commodity price averages react from the June rally; general business depression unrelieved.

Aside from some factors tending to hold down the yield, and the progress made in improving the stocks of goods, there is little to say on the bull side. The total supply is more than ample and the pressure is intensified by the large public storage. Demand for textiles is chiefly influenced by the cotton market, and thus contributes little to price strength.

Statistical Position

No hope of higher cotton prices is to be found in the present statistical position or in the probable position when the new crop has been made. The probable domestic mill consumption for the season is 5,200,000 bales and exports are not likely to exceed 6,300,000 bales. This makes a total disappearance of 11,500,000 bales. Including imports, the total supply for the season has been 18,400,000 bales. Thus the probable balance on hand in the United States, as of July 31, is 6,900,000 bales, and with the "city crop," the domestic carryover may run over 7,000,000 bales.

In view of large foreign stocks of American cotton, we are inclined to accept the evidence that recent exports have exceeded foreign mill consumption. Certainly, deliveries of American cotton for the season to both English and French spinners have run considerably below a year ago. It follows that world consumption for the season just closed will not much exceed 11,000,000 bales. This suggests a world carryover of a little over 9,000,000 bales, which has not been approached since 1921.

In the two years 1921 and 1922, however, the production of American cotton averaged about 9,000,000 bales, while the prospect now is for a crop of over 13,500,000 bales. This would mean a supply for the coming season of over 22,500,000 bales and a carryover on August 1, 1932, probably larger than the present one. The chief uncertainty lies in the progress made by the new crop, but we are convinced that only some now unforeseeable catastrophe can bring it appreciably under 13,300,000 bales.

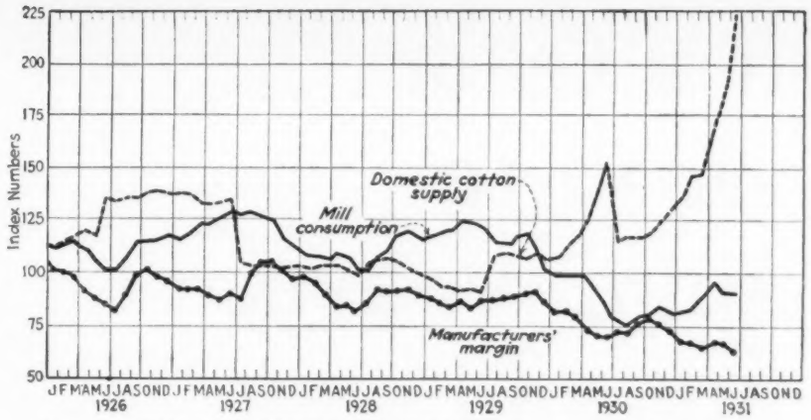

Index Numbers
225
200
175
150
125
100
75
50
Domestic cotton supply
Mill consumption
Manufacturers' margin
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1926
1927
1928
1929
1930
1931

Fig. 1. GENERAL COTTON BAROMETER: Consumption—Average daily adjusted for seasonal variation, three-month moving average; Manufacturers' Margin—Average of replacement margins; Average Monthly Available—Net domestic available for crop year adjusted for seasonal variation. 1921-1926 = 100 for all indexes

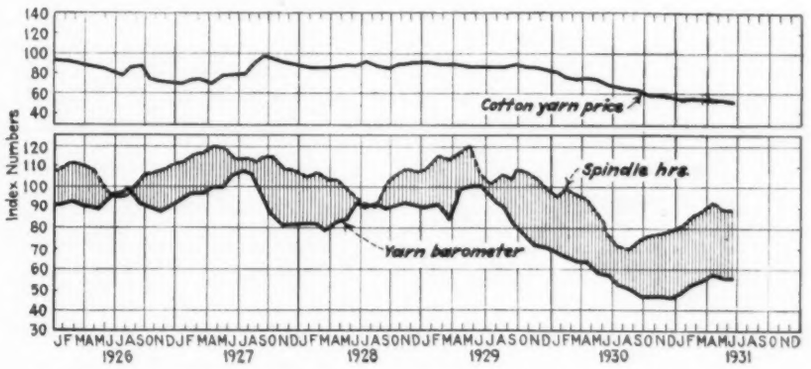


Fig. 2. COTTON YARN BAROMETER: Cotton Yarn Price Textile World *Index. Spindle Hours—Three-month moving avreage (Dept. of Commerce). Yarn Barometer—Based on orders from cotton cloth. Average of recent years = 100 for all indexes*

Perhaps it is too early to estimate, but some thoughts bearing on the possible level of prices during the coming season, if taken as merely tentative surmises, may be suggested. First, we will probably have this season 2,000,000 bales more American cotton than last season, when the New York spot price averaged about 10½c. This certainly suggests a lower average price than last season, probably one under 10c. Second, on the basis of the theoretical demand curve, we figure that if demand were anywhere near normal and the general level of commodity prices were fairly stable, the prospective supply of American cotton might be expected to show an average price for the season a little better than 10½c. But the demand is so far below normal and commodity prices so lacking in stability that such an estimate must be discounted, probably by as much as 1c. This line of reasoning again suggests an average for the coming season of less than 10c.

Perhaps as good a guess as any (always barring unforeseen crop damage) is that (1) if the present crop condition be assumed, there is likely to be a further decline in prices to new low levels in September and October—probably below 8c. (2) Next year there will probably be a strange tendency to reduce acreage, which would bring an advance in prices in the spring—perhaps to around 11c.

Demand and Supply

The supply of all cotton available for domestic consumption at the end of June was the largest since 1921. Average daily mill consumption declined more than usual for the season in both May and June, continuing well below average and, except for a year ago, the lowest for those months since 1924. The replacement margins of the average manufacturer, based on yarns and gray goods, are the lowest since the sharp break of July, 1924. This is significant not only because it indicates a lack of independent strength in textile markets, but also because it suggests the probability of a further curtailment in mill consumption.

While it is probable that as we introduce the new crop and distribute the accumulated carryover over the twelve months of the new season, the average monthly supply curve will drop to a considerably lower level as of July 31,

(Continued on page 64)

If a tailor were to spin, weave, cut and sew . . .

"Impossible," you'd say. "No tailor could make money if he worked from the raw wool to the finished suit of clothes."

Right. And yet, many weavers work in the same way when they spin their own yarn. In a few cases, it may pay the weaver to do so. But by and large it is unprofitable. On the surface, perhaps, you may get the yarn cheaper. When you go deeper and figure your overhead on the spinning, nine times out of ten you'll find that Quissett could supply you with yarn that is just as good, if not better, and at less cost.

And that is logical. Here is a huge mill, run by men whose life work is spinning, up-to-date in equipment, with management costs and overhead spread among hundreds of yarn users. When you spin your own yarn, you're directly saddled with all the spinning overhead. When you buy from Quissett, you pay only a tiny portion of the overhead, and you get the advantage of wise buying of raw cotton and skilled spinning management.

That is why, when you analyze your own spinning costs, you'll find it profitable to contract with Quissett for your yarn. Quality is high. Variety of yarns is endless. Delivery is fast and certain. Get in touch with Quissett.

Quissett Mill
New Bedford, Mass.

Wm. M. Butler, Pres.
Edward H. Cook, Treas.
Thomas F. Glennon, Agent

QUISSETT MEANS QUALITY

Our quotations based on
Cost + a reasonable profit.

QUISSETT
Cotton Yarns
AND
Quitex Spun
Rayon

YARNS AND RAW MATERIALS

TEXTILE WORLD ANALYST

♦Cotton Yarns Show Concessions

THERE are no outstanding features in the cotton yarn market this week. Business is very limited. Sales made are confined to small lots to fill in as needed and there is hardly enough business to indicate just where prices stand. Reports of concessions are heard as is usual when demand falls off. However, spinners are said to be showing firmness in their attitude to some low offers submitted. Many of them are apparently in rather good shape as far as orders go, and are showing no interest in any inquiries for nearby business. Several mills are said to be busy up until October on orders.

July is generally reported rather a slow month for new business; in fact it was one of the poorest months so far in 1931. On the other hand, specifications are said to have been well maintained, especially on carded yarns. While the volume of business during the first seven months of the year is reported good in the aggregate, complaint is made as to the profits earned on the lower prices obtaining. There is a general feeling there should be a development of buying in the near future. With retailers making efforts to develop business with their belated price reductions, together with their well-known reduced stocks of goods on hand, it is believed it will be necessary for goods to be purchased to meet future needs.

Weaving yarns are not very active. Demand for small lots to fill in as needed still prevails, so there is hardly enough business done to fix price levels. It would seem as if some short selling were being done by certain factors, in view of the attitude of most spinners. Sales of 20s two ply warps are noted at 18½c., with spinners quoting 19 and 19½c; 30s two ply warps sold at 23c., with spinners asking up to 25c.; 40s two ply warps sold at 30c.

Carded knitting yarns are reported showing limited new business. However, specifications are said to be very good, especially from up-state underwear manufacturers. Several houses, who make a specialty of this trade, state specifications in July against contracts for these yarns were much better than usual. Improved business with these mills has developed recently, and several mills are known to be operating full schedule, and in some instances at night. Pull-over shirts for men are active, while in some instances ladies' vests and bloomers in carded and combed yarns are in better demand. Most of the yarns used now have been purchased on a basis of 17c. for 10s frame spun. This is the general quotation from many spinners today, but sales as low as 16 and 16½c. are made, with 26s at 21½ to 22c. Carded hosiery is reported showing little activity.

Combed yarns continue very quiet, with little interest at this time. Prices therefore are very erratic so that it is difficult to quote any accurate price basis. Single 10s are noted around 24c. to 25½c.; 30s at 32½ to 35c. Ply yarns are also said to show more or less variation with few sales of consequence. Mercerized yarns continue quiet, with little new business, and while prices are nominally holding well to the established levels, occasional concessions are noted. Specifications continue to be very slow in developing, and must improve before much new business is expected.

♦Cotton Market Declines

THE bearish view of the statistical situation and coming crop prospects have dominated the course of the cotton market here during the last week. Selling on these factors has been encouraged by the absence of any particularly encouraging feature in the news from the world's goods markets and notwithstanding the extent of the declines, sentiment has remained bearish on the expectation of still lower prices when the new crop begins to move. Prices for October deliveries declined to approximately the 8c. level or nearly 2¾c. from the high price touched on the advance toward the end of June, while January deliveries have sold well below the 8½c. mark. Technically the position of the market must have improved and toward the end of this week there was a disposition to cover short contracts on declines and even up commitments in advance of the Government crop report on Saturday.

Private reports have pointed to a crop of about 14,000,000 bales on the average, and this is considered about 2,000,000 bales in excess of any present prospect for world's consumption next season, which many traders think is unlikely to exceed 12,000,000 bales. According to Secretary Hester, the world's consumption of American lint cotton last season was 11,045,000 bales and the world's carry-over of American lint was 8,710,000 bales, while some other authorities place the preliminary figures at fully 9,000,000 bales. Private figures on the crop indication averaging 14,022,000 bales have ranged from 13,325,000 up to 14,327,000 bales, so that there is a difference of opinion of approximately 1,000,000 bales as to the size of the crop between these estimates based on replies from their southern correspondents. No doubt, the government report scheduled for publication at noon Aug. 8 will be accepted as a fair statement of prospects at the beginning of August.

Reduction in Fertilizer

According to a report by the Bureau of Agricultural Economics the indicated total amount of commercial fertilizer used on cotton this year is about 1,457,000 tons compared with 2,396,000 in 1930. This unusual decrease of about 39% is accounted for by the material reductions in the acreage of cotton planted, in the proportion of acreage receiving fertilizer and the amount applied per acre. The total acreage of cotton fertilized shows a reduction of about 32% from the acreage fertilized in 1930, the indicated total being 12,599,000 acres in 1931 and 18,416,000 in 1930. The reported number of pounds used per acre in 1931 was compared with 260 lb. applied in 1930.

New crop cotton is not yet moving in sufficient volume to be a market factor of importance. Hand-to-mouth buying on the part of consumers is promoted by the favorable view of the coming crop outlook while the premiums on the late months in the futures market has a sustaining influence on the basis and relieves the spot markets of selling pressure. The proposals to sell a large amount of so-called "Farm Board" cotton to Germany on long term credits has met much opposition in trade circles. Washington advices intimate that if this cotton is sold by the Stabilization Corporation, as suggested, it will be replaced by purchases out of the coming crop. Cable reports received here from Bremen state that cotton men there doubt the success of such a plan, owing to the uncertainty of future cotton price

Market Briefs

Cotton: ***Steadier after establishing new lows.***

Cotton Yarns: ***Few sales made.***

Cotton Goods: ***Print cloth prices softer, but general tone is firm. Little buying.***

Wool: ***Medium grades in better demand.***

Worsted Yarns: ***Comparatively little trading.***

Woolen Goods: ***Novelties to be important in new openings.***

Silk: ***Raw silk stronger; fair demand from both knitters and weavers.***

Silk Yarns: ***Thrown and spun silk both quiet.***

Silk Goods: ***Better movement of fall lines; strike may cause shortage.***

Rayon: ***July yarn sales set record; heavy August business developing.***

Knit Goods: ***Winter sweaters improve, and swimsuit mills plan 1932 lines. Good call for winter underwear; stocks light. Hosiery quiet, but tone firm.***

SECOND ONLY TO CREATIVE GENIUS IS THE CHOICE OF WORTHY MATERIAL

ONLY THE CHOICEST FLAX WAS GOOD ENOUGH FOR THE DUTCH VROUW LACEMAKERS . . . . . .

In the magnificent cathedrals of Holland are treasures of lace—rich vestments, altar cloths and votive offerings—exquisite in design . . . . and preserved for centuries by threads of purest linen.

Our vigilance in selecting raw materials, is your protection . . .

The Whitman organization always has been proud of its products. No bars ever have been let down to permit entrance of sub-standard cotton or wool • Years of experience have taught us that ultimate results warrant this watchfulness. To weaken in our determination that only the best raw material shall enter into Whitman Yarns would be a betrayal of the confidence reposed in us by a loyal clientele • And the acceptance of the raw material is but the beginning of many inspections. With clockwork regularity samples are scientifically tested from each preparatory machine and spinning frame. Laboratory production control governs every Whitman process that your yarns shall be unsurpassed in standards of uniformity and running qualities.

WILLIAM WHITMAN COMPANY, INC.

COTTON and WORSTED YARNS

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Co-ordinating the services of this group of famous yarn mills:

MONOMAC SPINNING CO.
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ARLINGTON MILLS
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ACADIA MILLS
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CRAMERTON MILLS
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TALLAPOOSA MILLS
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High Quality Carded

YARNS AND RAW MATERIALS

TEXTILE WORLD ANALYST

fluctuations and financial developments in Germany.

MEMPHIS PRICES NOMINAL

MEMPHIS, TENN., Aug. 3.—The last week of the old cotton year was dull in this market, although sales here represented about 30% of aggregate sales at southern centers, indicating relatively good demand for specialties. Prices on the last day of the season were the lowest of the season, but there was a further decline of 10 points, to 7.15, on the first day of the new season. Prices are nominal. Wanted cottons for immediate shipment are subject to bargaining, with buyers on the defensive, owing to the practical exhaustion of stocks, while not enough forward business is being done to test values. Memphis is carrying-over a total stock of 102,507 bales—moderate compared with last year, but heavy compared with the normal carry-over; the unsold part of the total stock, actual count, is 12,449 bales, consisting of odds and ends. Sales for the season were 728,240 bales against 1,017,283 the previous season and 979,497 two seasons ago. The price of milling $\frac{7}{8}$" at the close of the season was 4.35 cents under the price a year before and 11.10 cents below the price two years before. End-season stocks at Mississippi delta points totaled 61,219 bales against 108,447 last year; total at Mississippi compresses, 142,372 bales against 146,543 last year. Arkansas compresses, July 27, 96,518 bales against 106,481 last year. Recent rainy weather affected the Mississippi crop adversely, but there is still a very good prospect in that state: the condition of the Arkansas crop is very high. The local trade expects a government estimate around 14,000,000 bales for the belt.

◆Cotton Wastes Continue Dull

RESTRICTED demand continues to feature the situation in the cotton waste market. Houses with stocks of desirable wastes are not trying to force sales in so thin a market and, as these wastes have cost them more money then they can sell them for, they are more inclined to hold everything until some spurt in raw cotton again brings in consumers.

Early in the week 7c. was the ruling quotation for peeler comber, and in one case a quarter cent less was accepted by a dealer for a small lot. Upland and peeler strips are still the most active wastes, No. 1 Upland selling on a basis of 6c, while peelers bring about a half cent more. A few sales of picker for use in mattresses were noted, fair grades selling around 3-3¼c. Demand for fly and threads is very dull.

◆Worsted Yarns Feel Firmer Prices

LESS activity is reported in worsted yarns following the action of several spinners in advancing yarn prices 2½c. There was some hesitation on the part of many spinners to advance their prices. However, they endeavored to convince their trade of the situation they themselves were facing, but did not always succeed. Today, more than one knitter for example is finding an opportunity to regret his failure to take advantage of the earlier low prices. Several have even gone so far as to blame yarn dealers for not protecting them against a situation they apparently refused to recognize.

Dealers say they could sell a good volume of yarns if they could accept their old price of 92½c. for single 18s slub dyed in that special grade. There is a good latent demand for yarns but for the present volume buying is held up until new price levels are established at least. There is the usual day-to-day buying reported for prompt delivery, and many factors state this is keeping up in satisfactory fashion so as to maintain their mills in good production.

Sweater manufacturers are reported operating in good volume at this time of the year. Many are now running on yarns purchased earlier at the lower prices, while others are using left-over stocks of bathing suit yarns which are adapted for this purpose. Business on both men's and women's sport coats is reported coming in good volume so the future is regarded as very satisfactory. Bathing suit business is still generally waiting for developments for the new season. This is also viewed with general optimism, and it is expected this will get under way some time in November, and show a good development of volume business.

Weaving yarns generally are not very active. This time of the year never develops any great volume of buying. Men's wear mills are winding up their late season as rapidly as possible. Yarns for prompt delivery are occasionally required, but the big buying will hardly develop until after the openings in September. Specifications for yarns are considered satisfactory on the volume still required for the close of duplicate heavyweight business. New price levels for yarns are also expected to be a factor here as this buying opens, but it is expected there will be little difficulty over yarn prices by that time with the wool market well established. Dress goods mills are showing rather scattered activity although no general operations are reported in volume. Crepe yarns in both worsted and woolen yarns are being used extensively in operations now noted. Bradford 2/50s are reported around $1.40, with single 30s french warps at $1.25. Fancy yarns in great variety are also reported with little opportunity as yet to determine just what are to be favorites. Ratine and boucle yarns are receiving much attention.

◆Medium Wools in Larger Demand

A FIRM but not advancing market is seen in fine wools, and a strong to rising market is observable in medium wools. Demand in general is not quite so heavy as a week ago, but this is accounted for in part by the fact that graders can make only provisional promises on shipment of wools already bought.

Good buying of wool continues the promising feature of the raw material situation, original lines of territory wool moving freely with prices firm, though not higher as compared with a week ago. Graded territory wools are less active, but the demand for graded fleece wools is very keen. The wool position is considered very strong and consumption is proceeding so rapidly that larger mill purchasing is likely to occur any time. The sold-up condition of the Boston market on fleece wools is reflected in an upward tendency.

Demand is broader than at any other period for year to date. All kinds of wools are selling, both woolens and worsteds, and slight advances are made here and there where spot supplies are small and demand is urgent.

Fine fleece wools have sold in very fair weight at 26½c., grease basis, in some instances at 27c. Fleece wools of half-blood grade continue very firm at 24½ to 25c. in the grease for Ohio and Pennsylvania offerings. There is a very good demand for fine and medium territory wool, centered mostly on three-eighths blood grade. Offerings are sufficiently restricted to hold prices very firm. Some houses are refusing to sell strictly combing fleece 48s, 50s at 21c. and are asking 22c. Recent purchasers of strictly combing 58s, 60s and 56s, and of clothing 56s, and 48s, 50s fleeces are pressing for deliveries, which are delayed by the lack of spot material. A notable feature of the wool situation at this time is the steady growth of manufacturing interests in three-eighths blood wool, both fleece and territory.

Most of the trade believe that the heavy consumption of wool is likely to continue for the balance of the summer, and yet machinery statistics just released by the census bureau covering June are not so encouraging as might have been anticipated. Wool manufacturing in June made a moderate average gain over May but it was entirely in

FABRIC NOVELTY

BEGINS WITH THE *Yarns*

"There's the design and there's the sample . . . WHAT'S WRONG?"

Time after time that question is put to us. The weaver or the knitter inspects the first piece of fabric as it comes off the machines, compares it with the design, and finds something lacking. Somehow, the fabric doesn't look as promising as the design.

To forestall this—to prevent all the waste and delay that creeps in when this occurs—we have a representative whose sole job is to advise you on the right novelty yarns to produce the desired effect in the finished fabric. And he gives you this advice before you go ahead on making up samples. That's when it's important. That's when it can save you a week's cost of several men and machines.

If you've got a fabric that doesn't satisfy you, by all means call in our representative. But play safe. Get in touch with him before you put the fabric into production, and take advantage of his knowledge of novelty yarns and what they will do in weaving and knitting.

The Montgomery Company
Windsor Locks, Conn.

NEW YORK SALESROOMS - 468 FOURTH AVENUE

NOVELTY YARNS

of Cotton, Worsted, Wool, Mohair, Rayon, Silk, combined into knot, Loop, Spiral, Flake, Ratine effects. Facilities of entire organization available for developing novel effects, for Knitters and Weavers.

TINSEL

Lame, Laminette, Cords, Cordonette, Threads, Brilliants, Perlerett, in Gold, Silver, Antique, Steel. Bare Copper Tinsel Conductor Cord for Electrical Purposes. Copper Mop Yarns. "Kwickscour" Line.

Example No. 6

Women's fancy cloaking, using Montgomery Coarse Ratine Yarn.

MONTGOMERY

Designers and Spinners of Novelty Yarns

YARNS AND RAW MATERIALS

TEXTILE WORLD ANALYST

the worsted division of the industry. The large amount of wool passing through the worsted combs was not reflected in any particular gain at the weaving end of the industry, activity of broad and narrow looms showing a moderate gain only from 51.2% in May to 53.5% in June. The woolen division as indicated by active machine hours in cards and spindles showed no gain over May.

◆Fine Noils and Rags Unusually Low Priced

PROSPECTS in the reworked wool industry and its satellite rag market are brightening. Considerable talk is heard in the goods market as to the probability of woolens taking a distinct turn for the better in the immediate future. If this occurs an expansion in the demand for rags and reworks would seem inevitable. The rag market has been forced by circumstances to an unusually low price level and this will unquestionably have considerable influence with manufacturers.

As between graded and mixed rags there is less margin of advantage to graders than there was in the early part of last month when hoods and fine light merinos sold higher, although the grader had to pay no more for the mixed softs. Rough cloth is at low price for a long time, around a cent a pound, and as the freight sometimes runs as high as 50c. per 100 lb. the situation is very perplexing. It seems as though a shortage of graded worsted rags may develop if, and when, the mills show seasonal interest in these cheap rags.

Waste dealers short of business are pointing with approval to the strong wool market and predicting that wool wastes will, sooner or later, share in the strength of the virgin raw material. This view hardly seems based upon the real facts in the case. Current strong wool market is owing to the heavy demand for combing wool and from these wools come the wastes handled by the market.

The various white wastes are moderately firm in price and meeting with restricted demand. Business is a little brisker than it was last week.

While demand for wool noils continues very slow the specialty noils are meeting some interest and types not produced in quantity in the United States, such as silk and camelhair, are appearing more regularly on the import list. That wools noils, particularly the fine quality, are very low priced is admitted very generally in textile circles. The relative position of fine noil is indicated by the index member, which stands at 48 as compared with 54 for wool and 70 for 200 commodities.

◆Thrown Yarn Prices 5c. Off

AUGUST has brought a "business duller than ever" period to the silk yarn mills. With humidity high, and manufacturers' interest low, neither throwsters nor spinners are moving stocks of any size. A few sporadic orders, all small and for spot shipment, pop up here and there, but they represent a negligible turnover, and the yarn men are patiently waiting for the real beginning of fall interest. Current thrown yarn demand is limited to occasional fill-in calls for organzines; crepes and trams both are quiet. Stocks in throwster, hands are moderate. These factors regard the broadsilk strike as probably a beneficial influence to their weaver-customers by cutting down fabric stocks, though they recognize the walk-out as one of the causes of the present lull. Thrown yarn prices dropped 5c.

Spinners hope for a favorable turn about the third week of the month. Broadsilk mills now are deferring all except immediate business, and there is little of that. The strike is not regarded as likely to affect spun yarn demand, since weaving mills which use this yarn are for the most part outside of the territory affected by the labor troubles.

◆Greater Activity in Raw Silk

RAW silk is developing strength, despite the prospects of diminishing consumption due to the strike. After considerable fluctuation, the primary market rallied and Monday found prices on the upturn; no appreciable rise was made, but the tone was perceptibly firmer. Buying has increased, especially spot, and the first part of the current week was active. Broadsilk mills, not yet affected by the strike, have increased output of fall fabrics, and are covering spiritedly on their immediate raw silk requirements. Demand from the hosiery industry also has improved slightly; these knitters refuse to place advance business, but they need silk and there is pressure for quick shipment.

Importers have difficulty in meeting the call for yellow 20/22s, of which there is very little available in New York. Other sizes, while not plentiful, are adequate to current buying. The primary market is uncertain as to outlook; reports early in the week indicated that the silk strike was spreading, bringing prospects of curtailed demand. Raw silk has not weakened, however, and there is no immediate sign of a recession; indeed, Yokohama is firmer than last week.

Fabric manufacturers buy only under absolute compulsion and they complain that raw silk levels are too high to permit proper margin, and are holding off in hope of a decline.

Importers take varied views of price prospects. Some hope for a yielding by Japan, which would bring lower levels, and increased business here; others believe that Japan will remain steady and that prices will go up rather than down. The Yokohama situation would seem to suggest the greater likelihood of a recession; it is difficult to believe that the present firmness there is anything more than artificial, as the industry is very much overproduced; there are excessive deliveries from the interior, and the increased domestic consumption by Japan is far from enough to assimilate the added output. Beside which there is always the bonded surplus that some day will have to be fed to the market.

◆July Rayon Sales Set New Record

EACH week brings stronger indications of a rayon yarn shortage in the fall. Early estimates show July sales to be the best ever recorded in the industry for that month; some producers indeed, found July turnover exceeded any month in 1930. Manufacturers are coming gradually to see the need for coverage, and more advance business is being placed; the limit these buyers will go is four weeks, however, and unless present signs fail, producers will be booked solid for the current month within two weeks. Several leading yarn companies had between 65% and 75% of their August capacity already placed when the month opened.

Orders are coming from all the chief markets, with rayon flat crepe as the outstanding exception. Crepe production has been hesitant, and weavers are loath to stock up yarn until they see their fall sales pick up. With producers so busy already, any rise of demand from crepe producers to normal proportions, will precipitate a very tight seller's market. Uusually, the crepe volume represents a substantial part of the total yarn sales.

Yarn demand at present is upsetting all calculations; there has been no summer lull at all, and prospects point to an exceptionally active August. Orders from knitters and weavers come in steadily. Weavers of rayon twills, taffetas and mixtures are placing substantial business. Underwear mills enjoy a good movement of their own lines, and have no hesitancy in covering for the current month.

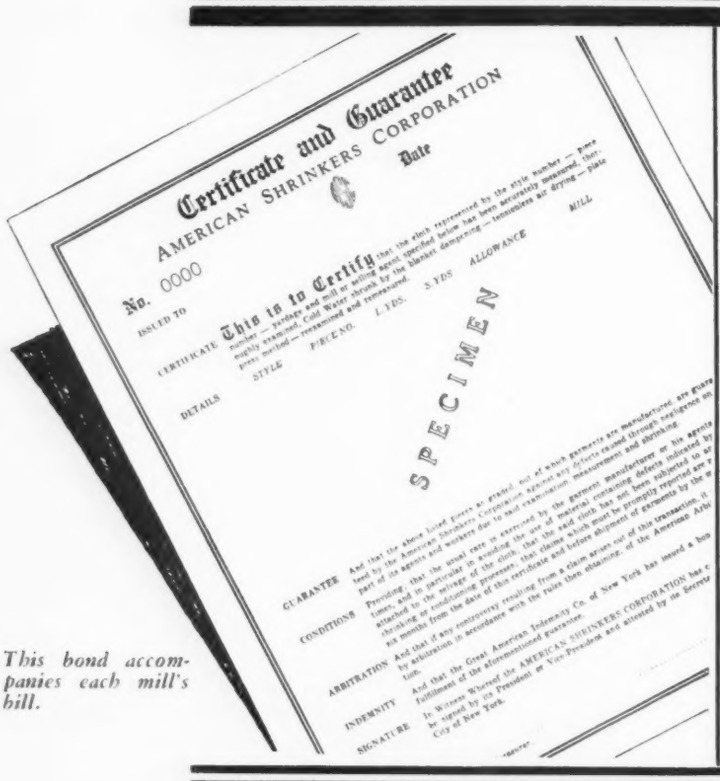
MEN'S WEAR WORSTED MILLS ATTENTION!!

Quality is fast replacing price as a Selling Point.

The assurance of a TRUE ECONOMY—giving your customers the option of buying *Shrunk* or *Unshrunk* cloth.

Show Your Samples Both Ways

RELIEVE yourself of all responsibility by having your goods conditioned in the most modern LONDON SHRINKING PLANT in the industry—after thorough measurement and examination before and after—goods matched and strung—details itemized on special examining memorandum for mill records—goods ticketed—labeled—wrapped and delivered to local customers—Mill's bill accompanied by our bonded certificate and guarantee (facsimile below)—which absolves mill from any claims and adjustments on goods we pass on our guarantee. *All at a surprisingly low cost.*



This bond accompanies each mill's bill.

WHY?

1. Saves mill inspection.
2. Uniform conditioning.
3. Deliveries per samples shown.
4. Minimizes returns.
5. Guarantee absolves mill.
6. Insures preshrunk shipments.
7. Selling point for Mill.
8. Certificate and guarantee bonded.
9. Enhances good will of mill by billing shrunk yardage which customer actually uses.
10. Selling samples and deliveries conditioned alike.
11. Conditioned samples indicate appearance of deliveries customers can expect to cut.
12. Saves mill packing—handling and delivery expense.

Write for particulars or for representative to call. We invite you to inspect our plant.

AMERICAN SHRINKERS CORP.

318 West 39th St., New York City

FABRIC MARKET REPORTS

TEXTILE WORLD ANALYST

Cotton Prints Show Slight Drop

THE primary market decline together with sluggish buying brought a recession in certain divisions of the cotton goods markets; prices of 68x72 print cloth fell ¼c. to 5¼c. and 72x76 dropped from 6⅛c. to 5¾c.; 80 sq. is available at 6⅛c. as against 6¼c. last week. The weakness was limited to prints and it failed to stimulate any marked demand. Cotton goods tone, as a whole, continues steady, and mills are still busy shipping orders placed during the unprecedented buying of June. Weavers are in satisfactory position and look for several weeks of inactivity, with the prospect of a pick-up after Labor Day.

Stocks in mills are light and the recession in prints is regarded as nothing more than momentary. Neither jobbers nor retailers have much merchandise on hand and any real consumer demand will bring a rush of orders to mills, it is expected. Current fabric call is spread evenly among all constructions, and is light; print cloths and bed sheetings are leaders, but even here there is no great interest.

Distributers gradually grow more confident regarding fall outlook and they tell of increased interest in quality fabrics; this has registered at the goods end in a better demand for the fine numbers. Colored goods sales have not averaged up to June, but the last week was better than the one preceding, and cotton merchants look for a healthy fall season.

The prevailing low price of cotton goods is expected to bring unusually spirited movement, once the season opens. Numerous houses predict that the second half will show a considerable increase in sales.

See Good Call For 1932 Wool Novelties

THE spring woolen and worsted openings are still a matter of indifference to the buying fraternity, but the weavers themselves are busy planning new lines. While the usual secrecy prevails as to details of offerings, several factors dropped the bars enough this week to let out some inklings. They indicated that surprises may be in store for those who expect the coming season to be ultra-conservative. Novelty fabrics promise to be more important than was at first believed.

Several weeks ago suitings mills leaned to the theory that, in view of the depression, it would be better to avoid new departures and hold as far as possible to the conventional and conservative in their goods. Now, however, some firms are experiencing a change of heart; there is a growing belief that attractive novelties will be important in suitings for the coming season. It is unlikely that many novelties will be shown, as the tendency of the market in an uncertain season is to play safe, but mill men who discussed the point this week said they thought cutters would be unusually interested in novelties, as a method of stimulating consumer demand in a quiet period.

Worsted suitings continue active, and mills are sold ahead on their more popular lines. Orders total less than in recent weeks, this being ascribed to the inclination of cutters to wait for delivery of business already placed. Some cutters press their sources frantically for shipment, claiming that lack of stock is keeping their organizations idle. The point of course is that the garment trade refuses to produce for stock, and buys only as it sells. Distributor call for ready-to-wear has picked up somewhat and manufacturers now have their shelves practically empty.

Overcoatings move steadily, the call being mainly for staples. Mill agents expect spot demand to continue active for eight weeks. Stocks are moderate, and there is a shortage of boucles which may grow.

Early Broadsilk Shortage Possible

DEMAND for broadsilks from the retail trade increases slowly; cutters also show some interest, but sales at that end are well below normal. There is much speculation among weavers as to the possibility of a fabric shortage at the end of the month. Stocks in mills are very low, as production started late, and the various labor troubles in the industry also reduced output. It seems probable that in specified lines, notably the crepe-back satins, buyers will have difficulty in getting shipments. Indeed cantons already are reported short by leading fabric houses. However, the degree of shortage is speculative, as there is a chance that total sales may be less than originally expected. Retail demand for silk dresses is backward, which has slowed up the activity among the cutters.

Current movement of broadsilk stocks is uneven, but the trend is toward the better qualities. At this end, prices are firm, and mills have no difficulty in getting list rates. Crepe-back satins in the $1.45 range are in good call, and weavers are still able to meet spot demand. Cutters are holding off on their bulk buying for fall and the fabric market does not look for any real pick-up at that end until the middle of this month. Cutters' stocks are at a minimum and any sudden spurt in the retailers' demand for ready-to-wear would bring a quick pressure on fabric mills for yardage.

The broadsilk outlook seems to favor the mills at least, such of them as are unaffected by the strikes. Much doubt clouds the prospects for the next four weeks, considering the strike and other elements, but one thing appears certain: If demand from cutters and retailers really rises to normal, there will be difficulty in getting quick shipment. Orders to date and production to date are both substantially below par, and even capacity output by mills during the next few weeks would not serve to bring stocks up to the usual volume of fall business.

Transparent velvets continue active movement, and are proving one of the most satisfactory of the fall lines to date. Stocks are scarce, but production is at high pressure, and buyers can get shipment usually within two weeks. Leading firms, however, are sold a month ahead on certain preferred piles. Velvet prices are profitable, since the recent increase, and indications point to a healthy season.

New Parachute Fabric Specifications

In order to have their product approved by the Department of Commerce, parachute manufacturers must comply with additional requirements. The regulations governing the licensing of parachute riggers have been revised and made more strict. It is specified that fabric shall be free from gums, starches, and foreign substances. It is also specified that the fabric shall be free from imperfections that will lessen its durability.

Czechoslovakia May Produce Raw Silk

Possibilities for the production of raw silk in Czechoslovakia are being considered by the Silk Institute of that country, according to a report received by the U. S. Department of Commerce from Assistant Trade Commissioner Sam Woods, Prague.

In 1928, the Czechoslovak silk mills consumed 850,000 kilograms of raw silk and the average consumption for the last few years has been about 700,000 kilograms. To produce this amount of raw silks, which would free Czechoslovakia from imports, would require about 8,000,000 kilograms of cocoons annually which in turn would require about 6,700 hectares of mulberry trees.

The most favorable locations in Czechoslovakia for the production of raw silk are in Slovakia.

KNIT GOODS MARKETS

TEXTILE WORLD ANALYST

◆Suspender Swimsuit Seen Big for 1932

THE demand for heavyweight sweaters is increasing slowly, and while the season is perhaps the most backward the knitters can remember, they are encouraged by the growing interest among distributors. There was plenty of inquiring this week, and numerous small orders; neither jobbers nor retailers will cover for more than their earliest requirements and the market looks for exceptionally active repeat business in mid-September. The call is chiefly for the darker shades and interest appears to center on ribbed sport coats. Prices are steady, and deliveries are moving; volume shipments will begin about the third week of the month.

Bathing-suit producers have pretty well completed their plans for 1932 openings. Much uncertainty surrounds actual dates, but several major companies plan to display lines in the middlewest about Aug. 17, and it is expected that the others will follow suit. Certain inklings as to new swimsuit style trends have been obtained. The suspender suit for men, which opened this year and was well received, will be an important part of the new line, and is expected to go over big next year. This suit is little more than trunks with suspenders supporting them from the shoulders. In women's suits, pastels will be important; in cases where design is conservative color will be gay, and where color is conservative the opposite will follow. Swimsuit stylists regard the modernistic styles as completely out and it is not expected that the new lines will give modernism any recognition. Stylists confirm the growing belief that women's swimsuits will not change materially in cut; it is assumed some daring novelties will be offered, but the sunback of the past season will be the chief model in the showings.

◆Underwear Stocks Very Limited

EXTENDED inquiry in the underwear market regarding stocks this week, disclosed that mills have only very limited supplies on hand. This is true both of winter and lightweight lines. It is significant that in the latter field, mills still ask time for shipment, hough the peak of the lightweight season has passed. Knitters do not look for any sharp drop in demand for lightweight cotton or rayons, due to the growing tendency toward these weights. Women's novelty lines, particularly mesh numbers, continue active and signs point to a steady movement throughout August. With respect to stocks, New York factors remarked that mill stocks were the lowest they had ever known.

Deliveries of winterweights are picking up; indeed, the shipping departments of mills are more active that the sales departments at present. Heavyweights move unevenly, and though some mills are in a fairly good position on their winter lines, the knitters as a whole complain of sluggish buying. The market looks for concentrated coverage at the end of the month, which will mean backward deliveries as mills have been producing cautiously throughout the first half. Despite the threat of lost business, due to inability to fill orders later, mill men are rather optimistic. They are encouraged by their own stock situation, which is expected to hold prices at prevailing levels, and may even precipitate the payment of premiums for quick shipment at the end of the month. Prices at present are very firm.

◆Quality Lace Hose Promoted for Fall

HOSIERY movement is sluggish, but this is regarded as normal for the mid-summer period. There is a growing interest in fall, and some mills have substantial business already booked on their heavierweight numbers; both men's and women's wool-and-rayon numbers are in demand for September shipment. There is much confidence in the fall prospect for the better quality mesh hosiery lines, especially those retailing at $1.95 and upward, and mills are increasing production, anticipating a pick-up in demand at the end of the month. Distributors place numerous spot orders for these lines at present, but all contracts are small.

Manufacturers are advertising these lace numbers widely as a winter formal wear proposition, and they expect a steady demand through the fall months. The prospect at that end is better than that facing the low-priced mesh lines. There is still much doubt as to whether the 85c. and $1.00 mesh will carry into fall successfully. Some mills are increasing their low-price output, definitely relying on the mesh vogue to keep their lines moving, but it is a highly speculative venture; other mills take the wiser course of holding down on output, pending some indications of fall trend.

Full-fashioned hosiery demand for spot shipment is light. Jobbers and retailers have little on hand, but they are holding off until the last minute, before filling their shelves for the expected September demand. Production is active and mill stocks of full-fashioned are understood to have increased somewhat. Prices are steady. There seems to be less insistence on price among buyers, and manufacturers continue to talk of an advance at the end of the month. It is taken for granted that any further rise in raw silk would bring such an increase, and some manufacturers say they will advance if silk holds its current levels. It is pointed out that present silk hosiery prices are totally out of line with the raw material market.

▸Du Pont Offers New Rayon Draperies

Among recent rayon fabrics developed by Du Pont Rayon Co. is a family group of drapery fabrics ornamented with small figures which produce interesting textural effects. The houses launching the fabrics are Atkinson-Wade & Co., with "Bro de Rae"; Marshall Field & Co. with "Dot de Rae" and "Dia de Rae"; F. A. Foster & Co. with "Point-O-Rae."

Bro de Rae simulates the French Broderie and appears to have an embroidered background which is printed over. Dot de Rae and Dia de Rae are printed in especially interesting patterns. The oak and laurel leaf design in Dot de Rae was suggested by an authentic Directoire wall paper. Point-O-Rae is being brought out in a collection of printed patterns. The fabrics have a wide range of household uses.

▸Cotton Supply Depressing

(Continued from page 55)

it is certain that the figure will be above that of a year ago and far above the corresponding date in 1921. This suggests lower prices and weakness until such time as better profit margins for the manufacturers and increased mill consumption can reduce the supply.

YARNS AND GOODS

One of the most hopeful points in the textile situation is the fact that yarns and goods prices recovered a little more toward the end of June and in early July than did raw cotton prices. This brought a little improvement in replacement margins. In the latter part of July, goods prices declined considerably, however, and the relatively high level of spindle activity as compared with orders for cloth is hardly favorable to continued strength in the yarn markets. Hand-to-mouth buying, largely controlled by the fluctuations in raw cotton, is much in evidence. While, therefore, the low stocks of cotton cloth warrant hope that a gradual improvement may be expected in manufacturers' replacement margins, it seems that continued curtailment of production will be required to realize on the situation.

TEXTILE FINANCIAL NEWS

TEXTILE WORLD ANALYST

♦Gotham Silk Hosiery Earnings Better

A CONSOLIDATED net profit of $254,482 for the six months ended June 30, is reported by the Gotham Silk Hosiery Co., Inc., after depreciation, interest and all operating charges, and after charges totaling in excess of $200,000 for the entire advertising cost of introducing "Adjustables," the new adjustable length stocking.

After deducting dividends on the preferred shares, the balance for the common stock was $135,169, or approximately 32c per share on the shares outstanding June 30, 1931.

For the corresponding period of 1930, the consolidated net profit was $163,941, which, after deducting preferred dividends, left a balance of $18,979 for the common stock, equivalent to 4c per share.

Gotham's report is far better than the trade had expected, for it was generally believed that the larger full-fashioned hosiery concerns had been so hard hit by underselling tactics of some of their smaller competitors that none would show a rise in profits. The Gotham management has kept close control of the company's inventories with the result that, despite the increased profits, the inventory item, as of June 30, last was slightly below the figure at the close of 1930, it is said.

Blumenthal Shows Loss

Sidney Blumenthal & Co. and subsidiary companies except Caromount Mills, Inc., report for the quarter ended June 30 net loss of $80,552 after depreciation, etc., against net profit of $111,889 in the second quarter of 1930. For the six months ended June 30, 1931 there was a net loss of $139,640, compared with net loss of $12,132 in the first half of 1930.

American Thread Shows Profit

The American Thread Co. Inc., New York City, for year ended March 31, 1931, reports net profit of $890,068 after depreciation, bond interest, taxes, etc., which compares with net profit of $1,309,053 for the previous year. Current assets on March 31, last, totaled $11,229,798, and current liabilities, $561,085, leaving working capital of $10,668,713.

United Piece Dye Works

Earnings of $936,374 for the first half of 1931, as compared with $1,911,164 for the corresponding period in 1930, are reported by the United Piece Dye Works. After preferred dividend requirements of $232,492, net income of $703,882 was equivalent to 78c a share on 900,000 shares of common stock outstanding. This compares with a net profit of $1,668,064, after deduction of $243,100 preferred dividend requirements in the first six months of 1930, or $1.85 a share on 900,000 shares of common stock.

Munsingwear Reports Loss

A consolidated net loss of $368,320 for the first half of 1931 is reported by Munsingwear; Inc. For the corresponding period of 1930, the company reported a net profit of $207,242, which was equivalent to $1.15 per share on the 180,000 shares of common stock outstanding and for the same 1929 period a net profit of $472,360, or $2.36 per share on 200,000 common shares.

Rollins Hosiery Mills

The Rollins Hosiery Mills, Inc., Chicago, reports, for the 24 weeks ended June 20, 1931, net profit of $73,237 after charges and Federal taxes, equivalent, after dividend requirements on the $3.60 preferred stock, to 17c per share on the 40,000 shares of common stock.

This compares with a net profit of $71,810 or 13c per share on the common shown for the 24 weeks ended June 21, 1930, and a net profit of $208,908, or $3.56 per share reported for the same 1929 period.

Robertson Bleachery Votes Dividend

Directors of the Robertson Bleachery & Dye Works, Inc., New Milford, Conn., have declared dividends totaling $10 per share on the preferred stock, payable in quarterly installments of $2.50 per share, the first payment being made on August 1. This is the first dividend payment for some time, and includes the regular dividend of 7% and an additional 3% on dividends in arrears.

Arcadia Mills

Arcadia Mills, Spartanburg, S. C., of which H. Arthur Ligon is president and treasurer, will retire their present floating debt by means of a new issue of $880,000 7% preferred stock, having voting privileges, which will be exchanged for the old issue of preferred stock. The plan of funding the company's floating debt, which was approved by the common and preferred stockholders at a meeting on July 30, provides for a stock-retirement sinking fund for which 20% of the mills' net earnings will be appropriated. Dividends on the new stock will be paid quarterly and the issue is callable at $110 per share.

A statement issued by an official of the company, following the stockholders meeting, was as follows:

"A called meeting of the stockholders of the Arcadia Mills was held to consider plans for funding the company's floating debt and to change its stock by a new issue of $880,000 preferred stock.

"The present preferred stock is to be exchanged for the new issue of preferred stock as was authorized by this meeting."

▶ Textiles on N. Y. Exchanges

The following shows the movements of the leading textile stocks listed on the New York Stock Exchange and Curb for the week ended Aug. 4:

	High	Low	Last Sale	Net Ch'ge
Adams Millis	27	23½	26½	+2½
American Woolen	9½	7	8	—
American Woolen, pfd	40	32	36½	—
Belding-Heminway	3½	3½	3½	+
Botany Mills, A	3½	1½	2½	+
Cannon Mills	20½	20½	20½	+
Century Ribbon	6½	5½	5½	+
Collins & Aikman	13½	12½	13	+
Consolidated Textile	1½	½	¾	+
Gotham Hosiery	9½	8½	9½	+
Industrial Rayon	30½	27½	30	+
Kayser, Julius	13½	12½	13½	+
Kendall, pfd	52	52	52	....
Mallinson	1½	1½	1½	....
*May Hosiery, pfd	19½	19½	19½	....
*Mock Judson	8½	8½	8½	+
Mohawk Carpet	17½	14	17½	+2½
Munsingwear	18	17½	17½	—1½
Pacific Mills	21	19	21	+2
Real Silk Hosiery	7½	5½	5½	—
*Tubize	5	5	5	+
United Piece Dye Works	19	18	18	—
Van Raalte	10	10	10	....

*Listed on Curb.

▶ New England Textile Stocks

Quotations at "Public Sale" are based on last sales at Boston Public Auctions and Boston Stock Exchange. Bid and Asked prices are latest quotations of dealers.

	Sale	Bid	Asked
Am. Mfg. Co., pfd	52	40	45
Amoskeag	9	..	..
Arlington	18½	24	25
Associated Textile	35–36½	..	35
Bates	60	44	49
Berkshire Associates, com	12½	6	8
Berkshire Associates, pfd	40½	25	..
Bigelow-Sanford, com	34½	..	..
Boott Mills	120½	70	80
Edwards	80½	54	59
Esmond, pfd	98	95	99
Farr Alpaca	35½	34	37
Hamilton Woolen	40	45	..
Hill	9	8	11
Indian Orchard	10	5	10
Ludlow	107½	105	108
Merrimack, com	35	14	..
Nashua, com	7½	8	10
Nashua, pfd	29	26	..
Naumkeag	70	68	72
Newmarket	16½	13	16
Otis	45	41	45
Pacific	19	..	..
Pepperell	66½	66	69
Plymouth Cordage	63	65	..
York	8½	6½	..

▶ Fall River Mill Stocks

(G. M. Haffards & Co., Fall River)

	Bid	Asked
Algonquin Printing Co	265	..
Barnard Mfg. Co	7	..
Berkshire (com.)	6½	8½
Berkshire (pfd.)	25	28½
Bourne Mills	14	..
Border City Mfg. Co	4	..
Charlton Mills	..	48
Cornell Mills	2	..
Davis Mills	..	..
Davol Mills	2	6
Flint Mills	..	..
General Cotton	1	3
King Philip Mills	..	..
Laurel Lake Mills (com.)	..	..
Laurel Lake Mills (pfd.)	½	..
Luther Mfg. Co	..	85
Merchants Mfg. Co	..	..
Narragansett Mills	1	..
Pepperell Mfg	65½	68½
Pilgrim Mills	29	..
Richard Borden Mfg. Co	1	..
Sagamore Mfg. Co	..	52
Shove Mills	..	5
Stafford Mills	..	1
Stevens Mfg. Co	..	30
Union Cotton Mfg. Co	..	..
Weetamoe Mills	..	1

QUOTATIONS

at close of business, Aug. 5, 1931
Prices cover average qualities unless otherwise stated

Cotton Goods

	Aug. 5	July 29	Aug. 6, 1930
PRINT CLOTHS			
27 -in., 64x60, 7.60	3¾c.	3¾c.	4¼c.
38½-in., 64x60, 5.35	4¾–4¾c.	4¾–4¾c.	5¼–5½c.
39 -in., 68x72, 4.75	5½c.	5½c.	6 –6¼c.
39 -in., 72x76, 4.25	5½c.	6 –6¼c.	7 –7¼c.
39 -in., 80x80, 4.00	6¼c.	6¼c.	7¼–7¼c.
BROWN SHEETINGS			
36-in., 56x60, 4.00	5¼c.	5¼c.	6¼–6¼c.
36-in., 48x48, 3.00	5½c.	5½c.	7¼–8 c.
37-in., 48x48, 4.00	4¼c.	4¼c.	6 –6¼c.
PAJAMA CHECKS			
36½-in., 72x80, 4.70	6 c.	6 c.	6¼–6¼c.
36½-in., 64x60, 5.75	5–5¼c.	5–5¼c.	5¼c.
MISCELLANEOUS			
Drills, 37-in., 3 yd.	6 c.	6¼c.	8½c.
Denims, 2.20	11 c.	11 c.	12½c.
Pickings, 8 oz.	14 c.	14 c.	17½–17½c.
Standard prints	7¼c.	7¼c.	8 c.
Eastern staple ginghams, 27-in.	8 c.	8 c.	10 c.

Cotton Waste

Peeler comber	6½– 7
Peeler strips	6¼– 6¾
Sak. comber	6½– 7
Choice willowed fly	3 – 3½
Choice willowed picker	2½– 3½
Sak. strips	8 – 9
Linters (mill run)	2½– 3½
White spooler (single)	5½– 6

Cotton Yarn

CARDED (Average Quality)
Double Carded 2c.—4c. higher according to quality

SINGLE SKEINS OR TUBES (Warp Twist)

4s to 8s	$0.16½	22s	$0.20½
10s	.17	24s	– .21
12s	– .17½	26s	– .22
16s	– .18	30s	– .23
20s	– .19	40s ex. qual.	.33½– .34½

TWO-PLY SKEINS AND TUBES

8s-2	$0.16½– .17	26s-2	$0.22
10s-2	.17 – .17½	30s-2	– .23
12s-2	.17½– .18	36s-2	– .29½
14s-2	– .18½	40s-2	.30½– .31½
16s-2	.18½– .19	40s-hi.brk.	.33½– .34½
20s-2	.19 – .19½	50s-2	– .39
24s-2	.21½– .22	60s-2	– .45

SINGLE WARPS

10s	$0.16½– .17	24s	$0.21½
12s	– .17	26s	– .22
14s	.17 – .17½	30s	– .24
16s	.17½– .18	40s ex.qual	– .34½
20s	.19 – .19½		

TWO-PLY WARPS

8s-2	$0.16½	24s-2	$0.22
10s-2	– .17	26s-2	– .22½
12s-2	– .17	30s-2	.23 – .24
14s-2	– .17½	40s-2 ordin.	.30½– .31½
16s-2	– .18	50s-2	– .38½
20s-2	.18½– .19	60s-2	– .45

8s-3 and 4-ply skeins and tubes; tinged: 15–15½ white, 16½–17; waste, 15

HOSIERY CONES (Frame Spun)

8s	$0.16	22s	$0.19½– .20
10s	.16 – .16½	24s	20½– 21
12s	– .17	26s	.21½– .22½
14s	– .18	30s tying	– .23
16s	– .18½	30s reg.	.24 – .25
18s	– .19	30s ex.qual.	.26 – .27
20s	.19 – .19½	40s	.31 – .32

COMBED PEELER (Average Quality)

TWO-PLY—(Knitting Twist) Cones

20s-2	$0.29½– .31	60s-2	$0.48 – .49
30s-2	.33½– .34½	70s-2	.58 – .60
36s-2	.36½– .37	80s-2	.68 – .70
40s-2	.38 – .39	90s-2	– .95
50s-2	.44 – .45	100s-2	1.12 –1.15

WARPS, SKEINS AND CONES

TWO-PLY—(Warp Twist)

20s-2	$0.30 – .31	60s-2	$0.49 – .50
30s-2	.34 – .35	70s-2	.61 – .62
36s-2	.36½– .37	80s-2	.70 – .72
40s-2	.38 – .39	90s-2	– .95
50s-2	.44 – .45	100s-2	1.12 –1.15

SINGLES

12s	$0.25½– .26½	30s	$0.32½– .35
14s	.26 – .27	38s	.35½– .36½
16s	.26½– .27	40s	.36½– .37½
18s	.27 – .27½	50s	.42 – .43
20s	.28 – .28½	60s	.47 – .48
24s	.30 – .30½	70s	.55 – .58
28s	.31½– .32½	80s	.65 – .68

MERCERIZED CONES—(Combed, Ungassed)

26s-2	$0.47 – .48	90s-2	$1.18 –1.23
30s-2	.49 – .50	100s-2	1.48 –1.53
36s-2	.52 – .53	120s-2	1.88 – 1.93
40s-2	.55 – .56	30s	60
45s-2	.57 – .58	40s	62
50s-2	.59 – .60	50s	.67 – .70
60s-2	.67 – .68	60s	.77
70s-2	.79 – .80	70s	.87 – .90
80s-2	.90 – .91	80s	1.05 –1.10

Cotton Prices and Statistics

FLUCTUATIONS OF FUTURES

	Closed July 30	For Week—High	For Week—Low	Closed Aug. 5	Net Ch'ge
August	8.32	8.32	7.79	7.79	—.53
September	8.46	8.46	7.93	7.93	—.53
October	8.60	8.68	8.07	8.07	—.53
November	8.73	8.73	8.20	8.20	—.53
December	8.84	8.93	8.29	8.29	—.55
January	8.94	8.99	8.40	8.40	—.54
February	9.03	9.03	8.50	8.50	—.53
March	9.15	9.20	8.60	8.60	—.55
April	9.22	9.02	8.67	8.67	—.55
May	9.30	9.40	8.75	8.75	—.55
June	9.43	9.43	8.81	8.81	—.62
July	9.15	8.88	8.88		

SPOT FLUCTUATIONS FOR WEEK (Middling)

	New York	New Orleans	Liverpool
Thursday, July 30	8.50	8.36	4.60
Friday, July 31	8.25	8.12	4.62
Saturday, Aug. 1	8.15	8.01	Holiday
Monday, Aug. 3	8.10	7.97	4.62
Tuesday, Aug. 4	8.15	7.97	4.49
Wednesday, Aug. 5	8.00	7.83	3.51

FOREIGN COTTONS

Egyptian Cotton

Alexandria Exchange, Aug. 4		Change
Nov. Sak	13.12	—1.17
Oct. uppers	9.03	—1.04

Aug.-Sept. Shipment c. i. f. Boston
(Tariff not included)

Fully good fair Sak	15.00
Fully good fair to good Uppers	11.25

(By Anderson, Clayton & Co.)

Foreign cottons	F. O. B. New York, Cents
Peruvian Tanguis Strict Middling	20
Peruvian Pima No. 1	19
Peruvian Moderate Rough	13½
Peruvian Full Rough	17
China Tientsin No. 1	9½
India Rough	7 to 10
India Smooth	7 to 10

(By Bruns-Nordeman Co.)

BASIS MIDDLING

	Saturday, Aug. 1	Saturday, July 25
10 markets average	7.60	8.38
Memphis	7.15	7.90

PREMIUM STAPLES

First Sales from Factors Tables at Memphis

Grade Strict Middling	Basis Steady
1⅛-in	10.10@10.35c.
1 3/16-in	11.15@11.40c.
1¼-in	16.10@16.35c.

CURRENT SALES

	For Week	Prev Week	Week Before
Memphis total	1,375	1,520	1,566
F.o.b. included in total	1,266	1,520	1,566
10 markets	4,532	6,968	24,195

MEMPHIS RECEIPTS, SHIPMENTS, ETC.

	For Week	Last Year	Year Before
Net receipts	172	1,165	770
Gross receipts	5,353	6,488	7,356
Total since Aug. 1, net	658,738	945,410	863,665
Shipments	14,604	10,293	10,342
Total since Aug. 1	1,441,664	1,893,895	1,856,060
Total stock	102,507	148,957	43,903
Decrease for week	9,251	4,805	8,986
Unsold stock in hands of Memphis factors	12,449	27,274	
Decrease for week	9	1,119	

AVERAGE PRICE AUG.-SEPT. SHIPMENT
HARD WESTERN COTTON
F.o.b. New England

	Middling	St. Middling
1 1/16-in	10½–11 c.	11½–11½c.
1⅛-in	11½–12 c.	12½–12½c.
1 3/16-in	13½–14 c.	14½–15 c.
1¼-in	18½–20½c.	20½–22½c.

Basis on New York, October, 8.25

SPOT FLUCTUATIONS AND STOCKS

Markets	Middling Aug. 5	Middling July 29	Middling Sales	Stocks This Week	Stocks Last Year
Galveston	8.40	7.90	537	398,241	184,210
New Orleans	8.36	7.83	145	571,347	318,813
Mobile	7.50	7.10	56	208,718	9,169
Savannah	7.98	7.47	....	343,943	103,599
Norfolk	8.19	7.75	663	54,512	48,070
New York	8.45	8.00	749	227,770	238,739
Augusta	8.13	7.63	1,355	65,270	46,648
Memphis	7.45	6.95	4,088	99,380	144,728
St. Louis	8.15	7.80	....	.....	7,336
Houston	8.30	7.80	1,716	722,108	513,499
Dallas	7.90	7.40	2,234	6,226	10,712

Liverpool 4.35d.

DIFFERENCES ON AND OFF MIDDLING

	Dallas	Memphis	Montgomery	Augusta	Average
WHITE GRADES					
M. F	.75†	1.00†	.85†	.75†	0.88†
S. G. M	.60†	.75†	.75†	.63†	.70†
G. M	.50†	.50†	.60†	.50†	.52†
S. M	.35†	.25†	.35†	.25†	.31†
S. L. M	.50*	.50*	.50*	.50*	.49*
L. M	1.00*	1.00*	1.00*	1.00*	1.00*
S. G. O.**	1.75*	1.80*	1.75*	1.75*	1.75*
G. O	2.40*	2.05*	2.50*	2.25*	2.36*
YELLOW TINGED					
G. M	.40*	.50*	.50*	.50*	0.47*
S. M	.65*	.75*	.75*	.75*	0.72*
M.**	1.25*	1.00*	1.25*	1.25*	1.20*
S. L. M	1.75*	1.75*	1.75*	1.75*	1.75*
L. M.**	2.50*	2.00*	2.50*	2.50*	2.40*
YELLOW STAINED					
G. M	1.00*	1.25*	1.00*	1.00*	1.03
S. M.**	1.50*	1.75*	1.50*	1.50*	1.53
M.**	2.50*	2.00*	2.25*	2.50*	2.33
BLUE STAINED					
G. M.**	1.25*	1.25*	1.25*	1.25*	1.25*
S. M.**	1.75*	1.50*	1.75*	1.75*	1.70*
M.**	2.50*	1.75*	2.50*	2.50*	2.35*

**Grades not deliverable on contract. †On Middling
*Off Middling.

Wool

OHIO, PENNSYLVANIA AND WEST VIRGINIA (IN GREASE)

Fine delne	$0.25½–$0.26½	¾ blood	$0.22 –$0.23
Fine clthg	.21 – .22	½ blood	.21 – .22
¼ blood	.24 – .25		

TEXAS AND CALIFORNIA (CLEAN BASIS)

Texas, 12 months	$0.59 –$0.60
California, Northern	.52 – .53

PULLED—EASTERN (CLEAN BASIS)

A.A.	$0.62 –$0.65	B-Super	$0.46 –$0.48
A-Super	.50 – .53	C-Super	.41 – .43

MONTANA, IDAHO AND WYOMING (CLEAN BASIS)

Stap'e fine	$0.61 –$0.63
Staple ¾ bld.	.57 – .58
Fine and fine medium	.55 – .58
¾ blood	.48 – .50
½ blood	.44 – .47

MOHAIR—DOMESTIC

Best carding	$0.23 $0.25
Best combing	.31 – .33

MOHAIR FOREIGN (IN BOND)

Turkey fair, average	$0.17 –$0.20
Cape firsts	.18 – .21

FOREIGN CLOTHING AND COMBING (CLEAN BASIS IN BOND)

Australia:	
70s	$0.53 $0.55
64s	.46 – .48
58s-60s	.41 – .43

(IN GREASE)

Montevideo:	
58s-60s	$0.19 –$0.20
56s	.19 – .20
50s	.16 – .17
Buenos Aires:	
4s, 40-44s	$0.14 –$0.15
5s, 36-40s	.12 – .14

FOREIGN CARPET (GREASE BASIS IN BOND)

Aleppo washed	$0.22 –$0.24
China: Combing No. 1	.13 – .14
China Filling Fleece	.12 – .14
Szechuen ass't	.12 – .14
Cordova	.14 – .15
Scotch black face	.15 – .17
East India: Kandahar	.17 – .19
Vican'r	.23 – .25
Joria	.23 – .24

Worsted Yarns

ENGLISH SYSTEM WEAVING

2-20s 36s	$0.77½–0.80
2-24s 40s	– .85
2-26s 44s	.87½– .90
2-28s 46s	.92½– .95
2-30s 48s	.95 – .97½
2-32s 50s	.97½–1.00
2-30s, 64s fancy mixes	1.37½–1.45

(Single yarns 5c. less than above)

2-36s, 58s	$1.22½–1.25
2-40s, 60s	–1.32½
2-40s, 64s	1.35 –1.37½
2-50s, 66s	1.45 –1.50
2-60s, 70s	1.85 –1.87½

ENGLISH SYSTEM KNITTING

2-20s, 44s in oil	$0.75 –0.77½
2-20s, 48s in oil	– .80
2-20s, 50s in oil	.80 – .82½
2-20s, 56s in oil	.92½– .95
2-20s, 60s in oil	1.10 –1.12½
2-20s, 64s in oil	1.20 –1.25
1-18s, 48s dyed	.97½–1.00
1-18s, 50s dyed	.97½–1.00

(Oil yarns 17½c. less)

FRENCH SYSTEM

1-20s, 58s	$1.05 –1.07½
1-20s, 60s	1.10 –1.12½
1-18s, 64s, dyed	1.32½–1.35
1-26s, 64s	1.12½–1.15
1-30s, 60s, Warp	1.20 –1.22½
1-30s, 64s, Warp	1.22½–1.25
2-30s, 64s, Fancy mixes	1.45 –1.47½
2-40s, 64s, Zephyrs	1.35 –1.40
1-50s, 66s	1.47½–1.52½
2-50s, 66s	1.50 –1.55
1-60s, 70s	1.85 –1.87½
2-60s, 70s	1.90 –1.95

FRENCH SPUN MERINO WHITE

1-30s, 50-50-58s on cops	$ .95 –1.00
1-40s, 50-50-6 's on cops	1.10 –1.15
1-40s, 50-50-64s on cops	1.12½–1.15
1-40s, 50-50-64s Australian cops	1.20 –1.25

Underwear mixes, 3 to 5c., Solid color, 35c. additional.

New York Top Futures

	Closed July 29	For the Week High	Low	Closed Aug. 4	Net Change
September	73.20	75.10	73.00	75.10	+1.90
October	73.20	74.20	73.00	74.20	+1.00
November	73.20	74.20	73.00	74.20	+1.00
December	73.20	74.20	72.50	74.20	+1.00
January	73.00	74.20	72.50	74.20	+1.20
February	73.00	74.20	72.50	74.20	+1.20
March	73.00	74.20	72.50	74.20	+1.20
April	73.00	74.20	72.50	74.20	+1.20
May	73.00	74.20	72.50	74.20	+1.20

Tops and Noils

TOPS—BOSTON

Fine (64-66s)	$0.85–$0.87
Half-blood (60-62s)	.78– .80
High ¾ blood (58s)	.70– .72
Aver. ¾ blood (56s)	.63– .65
Low ¾ blood	.60– .62
High ½ blood (50s)	.53– .55
46s S. A. and N. Z.	.51– .53
44s S. A. and N. Z.	.50– .52
40s S. A. and N. Z.	.48– .50

TOPS—BRADFORD, ENG. (JULY 31)

Fine (70s)	26½d	¾ bld. (56s)	16 d
Fine (64s)	23½d	½ bld. (50s)	12½d
½ bld. (60s)	21½d	Cross-bred (46s)	10½d
¾ bld. (58s)	18½d		

NOILS—BOSTON

Fine	$0.38–$0.41	High ½ bld.	$0.31–$0.33
Half-bld.	.36– .38	Low noils	.27– .30
Aver. ¾ bld.	.34– .36	Medium colored	.24– .26
Fine colored	.31– .33		

Wool Substitutes

WOOL WASTE

Lap, fine white	$0.63 –$0.67
Lap, fine colored	.46 – .50
Hard ends, fine white	.52 – .55
Hard ends, ¼ blood white	.35 – .38
Hard ends, fine colored	.25 – .27
Hard ends, medium colored	.18 – .20
Card, fine white	.23 – .26
Burr, fine Carbonizing	.27 – .30

OLD WOOLEN RAGS (GRADED FOR MFRS.)

Merinos, Coarse Light	$0.05 –$0.05½
Merinos, Fine Dark	.03½– .04
Merinos, Fine Light	.11 – .11½
Serges, Blue	.05½– .06
Serges, Black	.05½– .06
Serges, Red	.08 – .09
Knit, White	.22 – .23
Knit, red	.10½– .11
Knit, Light Hoods	.12½– .13½
Worsted, Light	.05 – .05½
Worsted, Blue	.05½– .06
Worsted, Black	.06 – .06½

Silk Yarns

THROWN SILK (60 day basis)

	Nominal
Japan organzine, 2 thd. spec. gd. XX. sk. 85%	$3 85
Japan organzine 2 thd. grand sk. 83%	3.70
Japan organzine, 2 thd. sp. crack. sk. 81%	3 55
Japan crepe, 3 thd. gd. XX bob. 83%	3 65
Japan crepe, 3 thd. sp. crack. bob. 81%	3 50
Japan grenadine, 4 thd. sp. grand singles, 87%	4 95
Japan grenadine 3 thd. 90%	5 70
Canton crepe, 3 and 4 thd. ns. 14/16 on bobbins	2.60
Hosiery tram, 3 thd. Japan 90%	4 75
Hosiery tram, 5 thd. Japan, 85%	3 60
Hosiery tram, crack XX 78%	3.25

SPUN SILK YARNS (Terms: net 30)

40/2	$3.10	60/2	$3 45
54/2	3.30	62/1	2.35

Raw Silk

(60 Day Terms. Spot Goods.)

	13/15 White	20/22 White	20/22 Yellow
Super Grand, 87%	$3.10	$2.55	$2.40
Special Grand, 85%	2.90	2.45	2.35
Grand XX, 83%	2.75	2.40	2.30
Special Crack, 81%	2.65	2.40	2.30
Crack XX, 78%	2.55	2.35	2.25
Extra Extra, 73%	2.50	....	....
Best Extra, 68%	2.45	....	....
Canton filature, new style, 14/16			$1.65
Canton filature, new style, 20/22			1.55
Tussah filature, 8 cocoon			1.05

NATIONAL RAW SILK EXCHANGE

	Close July 29	For the Week High	Low	Close Aug. 4	Net Chge.
August	2.29	2.32	2.25	2.33	+.04
September	2.27	2.31	2.25	2.31	+.04
October	2.27	2.31	2.23	2.31	+.04
November	2.27	2.30	2.24	2.29	+.0
December	2.27	2.30	2.23	2.29	+.02
January	2.27	2.30	2.24	2.29	+.02
February	2.27	2.30	2.25	2.29	+.02
March	2.27	2.30	2.24	2.29	+.02

Total number of bales, 4,800. Total approximate value $1,627,920. Trading unit crack XX 13/15, white 78%.

Domestic Rayon

VISCOSE PROCESS

Denier	Filament		First Qual.	Second Qual.
50	14		$2.15	$1.95
75	18–30		1.35	1.25
100	18–40		1.10	1.00
125	36–50		1.00	.90
150	30		.70	.67
150	24–40		.75	.72
150	60		.85	.82
150	75–90		.85	.82
170	24–27		.75	.72
170	60		.85	.82
200	30		.75	.72
200	35–42		75	.72
300	42–62		.63	.60
450	54–60		.63	60
600	72–96		.63	.60
900	100–144		.63	.60

NITRO-CELLULOSE PROCESS

Denier	First Qual.	Second Qual.	Denier	First Qual.	Second Qual.
75	$1.35	$1.25	150	$0.75	$0.72
100	1.05	.95	175	.75	.72
125	.95	85			

CUPRAMMONIUM PROCESS

Denier	Filament	Price	Denier	Filament	Price
15	24	$3.10	65	45	$2.00
25	24	2.85	80	60	1.70
30	24	2.60	100	75	1.35
40	30	2.40	120	90	1.22
52	30	2.20	150	112	1.10
			180	135	.97

ACETATE PROCESS

Denier	Price	Denier	Price
45	$2.25 2.75	120	$1.90
55	2.05–2.55	140	1.30
65	2.45	150	1.40–1.85
75	1.80–2.70	200	1.55
100	1.65–2.45	300	1.50

Rayon Waste

Open bleached waste	$0.13–$0.14
Open unbleached waste	.10½
Bleached thread waste (mfs.)	.09
Bleached thread waste (misc.)	.06– .07
Colored thread waste	.04
Colored clips	.04

CONVERTED RAYON WASTE

Bleached tops	$0.30–0.32½
Unbleached tops	.28– .29
Bleached noils	.11
Unbleached noils	.09½
Bleached garnetts	.12
Unbleached garnetts	.13
Colored garnetts	.10– .11

Silk Waste

Kibizzo Kakai Grand XX	$0.50
Kibizzo Kakai Triple Extra	.44
Frison Grand Double	.49
Pierced Cocoons	.50

Silk Strike Spreads to Dyers; Settlement Negotiations Pending

POSSIBILITY of the silk strike spreading to the dyeing and finishing industry which might mean a real tie-up of the broadsilk industry, increased this week when operatives in the Colt, N. J., plant of the Associated Dyeing and Printing Corp. went on strike in sympathy with the weavers and other workers now out in the Paterson, N. J., district. Estimates varied as to the numbers of dyers on strike; officers of the National Textile Union, Communist organization, which effected this walk-out, said 300 dyers were out, but others placed the total at 50. Executives of the large dyeing establishments in the district are confident the dyeing industry as a whole will not be tied up. Officers of the Silk Dyers and Printers Association and the Silk Dyers Association of America, expressed the belief that employees of member plants would remain loyal.

The question of whether the strike would spread to the dyeing industry has been a paramount one since the walk-out started, as the dyeing and finishing plants in Paterson district represent about 80% of the silk finishing industry. Raw silk importers and throwsters selling to the silk manufacturers have not taken the strike very seriously, relying on the loyalty of the dyers and finishers. The A. F. of L. unit, embodying the merged Associated Silk Workers and the United Textile Workers, is understood to have adopted a passive policy as regards dyers and finishers, and to concentrate for the present on effecting a complete strike at the manufacturing end. The program of these unions calls for organization of the dyeing-finishing plants, but the labor officers claim that jacquard firms are eager to settle and they are more interested in reaching agreement with this group, than in extending the strike, at the moment.

The affiliated unions claim the jacquard weavers' strike to be 90% effective in the Paterson district, and the plain goods weavers strike to be 75% effective. A strike settlement committee has been appointed and plans were being formed for an early conference with the manufacturers. The A.F. of L. unions stated Tuesday that horizontal warpers are now 100% organized and that the loom fixers and twisters' division will be completed soon.

Workers in several additional silk plants, mostly small units, joined the strikers this week. The plant of John Hand & Sons closed Tuesday afternoon. All the weavers of the Henry Doherty Silk Co., of Clifton, N. J., walked out Monday, but the workers, refused to ally themselves either with the Communists or with the A.F. of L. organization, and plan to negotiate separately.

A new wage scale, calling for increases of 8 to 20% was ratified by the A. F. of L. unions; the demands include recognition of the unions and strict adherence to the 8-hour day. The demands were to be presented to the jacquard manufacturers, probably through the mayor's committee on conciliation.

The A.F. of L. union leaders are understood to be averse to a protracted strike, and they expressed confidence this week in an early settlement. The strike is costing the city of Paterson about $50,000 daily, and both sides are apprehensive that the dispute may develop into a duplicate of the 1913 strike which lasted 22 weeks and caused a loss of $10,000,000 to the industry.

▸ Throwsters' Outing Aug. 22 at Sciota, Pa.

The seventh annual outing of the commission throwsters division of the Silk Association of America, Inc. will take place August 22 at Linden Court, Sciota, Pa. The Danville, Lehigh Valley, Paterson, Scranton and Wilkes-Barre sections of the division are expected to attend. A luncheon has been planned for the early afternoon to be followed by golf, base ball, swimming and other sports. The division's executive committee is in charge of plans.

▸ Green May Be Paterson Speaker

Arthur Harris, chairman of the personnel group of the committee arranging Silk Industry Week, to be held in Paterson, N. J., in the fall, has announced tentative plans for the three events which will be held during the week. He said that among the speakers at the meetings would probably be William Green, president of the American Federation of Labor; State Labor Commissioner Charles R. Blunt, and a representative of the U. S. Department of Labor. It is also likely that the Chinese ambassador at Washington would attend and that his research subjects would be handled by a group of local experts. Silk Industry Week will consist of three main events, the National Silk Convention, Silk Machinery Exposition and Silk Institute.

▸ Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended Aug. 1, based upon data compiled by the Department of Agriculture, follow:

	Week Ended Aug. 1	Total to Date 1931	Total to Date 1930
Domestic	20,650,000	188,009,000	175,399,000
Foreign	1,003,000	29,801,000	43,863,000
Total	21,653,000	217,810,000	219,262,000
IMPORTS AT PRINCIPAL PORTS			
Boston	1,003,000	29,801,000	43,863,000
Philadelphia	845,000	33,294,000	1,705,000
New York	1,058,000	31,441,000	28,652,000
Total	2,906,000	94,536,000	104,220,000

▸ Two N. E. Mills Hit By Strikes

The week brought two new labor difficulties in New England; 50 wool sorters went on strike Wednesday at the plant of the Branch River Wool Combing Co., North Smithfield, R. I., and 80 spinners and weavers have quit at the plant of the Ware (Mass.) Woolen Co., asking more pay.

Pita Fiber Again Attracting Attention in This Country

THE recent success of some manufacturers in producing fabrics from pita has again stirred up interest in the possibilities of the fiber. Pita is a variety of wild pineapple which grows extensively in South America and the Philippines and which was described in an article in TEXTILE WORLD, Feb. 10, 1923. Difficulties in decorticating prevented much interest until the development of suitable machinery shortly after the war, but thereafter several groups became interested, with the bulk of production being taken by the flax mills of Ireland.

The Atrato Mfg. Co., Portland, Me., which markets its pita under the trade name of "Atrato," has been active in developing use of the fiber in this country. J. B. Payson, in describing their operations, states that they control about 70,000 acres of pita producing jungle in Colombia, S. A. The plant grows wild and, being a weed, needs no cultivation. The leaves grow 4-5 ft. each year and attain full height in about eighteen months, springing up again when cut. Mr. Payson states that their present mode of handling is to remove the fiber from the leaves in Colombia, cut into 33 in. lengths, and ship to this country in bales.

Pita spins best on the flax system, but can also be handled by woolen and cotton machinery. In handling on the woolen system the fiber is broken into spinnable lengths on the card, but in utilizing cotton machinery it is necessary to cut the fiber into suitable lengths. While the cutting necessary on the cotton system yields a yarn with less tensile strength than when handled on flax machinery, several who have handled it in this manner state that the yarn produced is stronger than a corresponding cotton yarn. Two of the advantages of the fiber are extremely high breaking strength and a marked resistance to

the action of water. According to Mr. Payson, some of the places where the fiber has been used are in the manufacture of towels, table-cloths, fish line and twine. A fabric suitable to use in making men's knickers has been produced by the use of cotton machinery. Pita dyes with cotton colors.

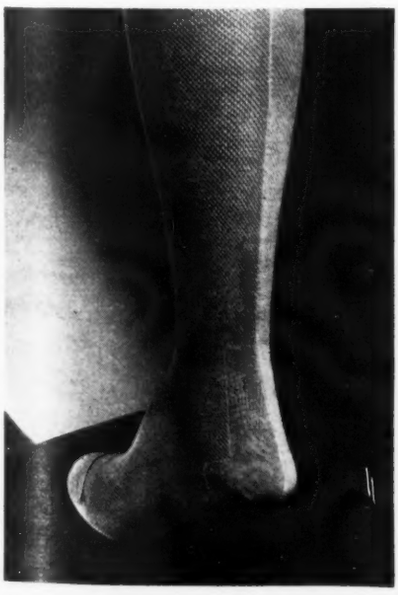
▸ Silk Imports Show Increase

Raw silk imports during the first seven months of 1931 were 21.7% higher than during the same period of 1930, the Silk Association of America reports. Deliveries to mills showed an increase of 9.3% while stocks at warehouses on July 31 were 29,921 bales compared with 35,565 bales on July 31, 1930.

Imports of raw silk during July were 37,315 bales as compared with 46,825 bales during the previous month and 47,063 bales during July, 1930. Deliveries to mills during July were 44,746 bales as compared with 42,161 bales during the previous month and 39,948 bales during July, 1930.

▸ Wamsutta Gives Souvenirs To Constitution Crew

When the refitted Constitution, old fighting ship, visited New Bedford, Mass., last week, the Wamsutta Mill, cooperating with the Star Store, presented the officers with Wamsutta broadcloth shirts, a line of merchandise recently developed by the company. The crew received two pairs of Wamsutta shorts each. Officers and crew of the minesweeper Grebe received similar souvenirs.



This pin-hole type mesh hosiery, made of mercerized cotton yarn of Durene Association standards, is enjoying an exceptionally good consumer demand. The line is manufactured by Ideal Hosiery Co., Maryville, Tenn. The stocking has an attractive lacy type welt, narrow heel and ankle and carefully turned mock seam.

Would Farm Board Replace Cotton Sold to Germany?

From TEXTILE WORLD's *Washington Office*

IN CONNECTION with the proposal that Farm Board cotton and wheat held by the two stabilization corporations be sold to Germany on liberal credit terms, the board members are confronted with the question of whether or not they should replace any cotton and wheat thus sold by purchasing additional stocks on the open market. It is obvious that the ultimate effect on the domestic cotton market would tend toward further depression if a substantial part of the 1,300,000 bales of stabilization cotton should be sold to Germany and not replaced. This would simply mean replacing commercial exports of cotton to Germany with the reserve stocks controlled by the Farm Board.

It is conceded that the more liberal credit terms that would be allowed by the Government would stimulate buying in Germany—especially so since Germany acts as a cotton broker for Russia, Poland, and the Baltic States. Unless the Government replenished its cotton holdings, however, the American market would be deprived of a needed outlet and would only gain the somewhat intangible benefit of having the stabilization cotton, or a large part of it, pass definitely out of the picture. To an indeterminable extent, this would boost the domestic market by removing apprehension as to the release of stabilization cotton. While the Farm Board's promise to keep its cotton holdings off the market expired on Aug. 1, assurances have been given that no new course of action will be taken pending a statement of policy or a restatement of existing policy.

As a buyer of American cotton, Germany has been declining during recent years. This decline has been still more precipitate as a result of the debt crisis. Due to recent financial restrictions, cotton stocks at Bremen, the chief receiving port, have been reduced to 357,320 bales. Thus the German market is in a good position to absorb large quantities of cotton, if suitable credit terms can be arranged. In 1930, Germany bought 1,637,000 bales of American cotton. In 1929, these purchases amounted to 1,657,000 bales, while the average yearly purchase in the period between 1910 and 1914 amounted to 2,437,000 bales.

It is more or less taken for granted that a certain amount of any cotton sold to Germany will find its way into Russia. Although steadily increasing its own production, Russia still needs American cotton. A short time ago a Russian proposal for the purchase of some 100,000 bales of stabilization cotton was rejected by the Farm Board. The reason advanced for this rejection was that it would be improper for the Farm Board to become involved in a credit transaction with a country not recognized by the Government. It is understood, however, that no objection will be raised if Russia acquires part of any stabilization cotton that may be sold to Germany.

The present status of the situation is that all parties are awaiting a definite proposal from Germany. The President is watching developments closely. With the full approval of the President, Ambassador Sackett at Berlin has tendered to the German Government a suggestion that it avail itself of this opportunity to buy cotton and other raw commodities on liberal credit terms. In addition to wheat, it has been suggested that American copper be made available to Germany on easy terms, so as to stimulate the metal industries.

Chairman Stone of the Farm Board has indicated that the Board will approve the sale of stabilization cotton and wheat to Germany. He will not commit himself, however, as to whether or not the board will replenish its stock in the event of such sales. This is believed to account for the apparent indifference of the cotton market to the matter, as is evidenced by the decline of cotton to the lowest prices of the season simultaneously with news of favorable progress of the proposal both here and in Germany.

▸ The End of the Road

Walls of the old Montour Mills, Sparta, Ga., which operated years before the Civil War, have been blasted away to eliminate the danger of their falling on the adjacent thoroughfare. The old plant was one of the historic industrial concerns of the South and during the Civil War engaged in the production of cloth for Confederate uniforms. The mill building was utilized by an oil mill for several years and later was converted again into a cotton mill by the Sparta Cotton Mills Co. The cotton manufacturing concern suffered from internal dissension and was finally liquidated.

▸ Cotton Fiber Quality and Ginning Methods

The grade, staple and preparation of cotton may be seriously affected by ginning when it contains too much moisture, according to studies made at the cotton ginning laboratory at Stoneville, Mississippi, and in the cotton fiber research laboratories at Washington, D. C. Too rapid operation of the gin will also injure the fiber. In explaining results of these observations, F. L. Gerdes, fiber technologist of the Bureau of Agricultural Economics said, "Studies of the effects of ginning methods were begun as a result of protests received by the Department of Agriculture from the cotton industry in this

country and abroad to the effect that the preparation of American cotton is not as good as it used to be. That is, it is rougher, more neppy and nappy than formerly."

Preliminary studies indicate, Mr. Gerdes said, that successful cleaning and extracting depends on the moisture content of seed cotton; and that excessive moisture content reflects itself in the processes of ginning, causing, among other things, a corresponding loss or shortening of fiber lengths, and a lowering of grade—in some instances as much as four grades. It also affects the preparation.

Oldest Textile Worker

Regarded as the oldest ex-textile worker in the United States, Leprelet M. Logee, died in the Massachusetts Masonic Home, Charlton, Mass., July 25, at the age of 105. In 1831, when only five years old, he started work in the Slatersville (R. I.) Cotton Mill. Moving to Fall River in 1845 he became overseer in a cotton mill and later worked in several other New England plants, but in 1859 he turned his eyes southward and became superintendent in a cotton mill in Macon, Ga. After the Civil War he worked for the Whitin Machine Works for a time and is believed to have been the first to set a Mason and Franklin mule in operation.

Business News

Wallace Taylor Rejoins Textile-Finishing

Wallace Taylor, who has been connected with United Merchants & Manufacturers, Inc., during the last two and one-half years, has reassumed his position as sales engineer with the Textile-Financing Machinery Co., manufacturers of bleaching, mercerizing, dyeing, drying, printing, and finishing machinery. He will make his headquarters at the Providence office of the company. Mr. Taylor has had a long and varied experience in processing cotton and silk fabrics, and is well known in the trade.

Southern Manager for Rohm & Haas

P. H. Del Plaine, who has been connected with the Rohm & Haas Co. for several years in its Bristol laboratory and Philadelphia office, has succeeded A. R. Thompson, Jr., as southern manager of that company with offices in Charlotte, N. C.

Leaves Atwood Machine Co.

Stanley A. Morton who has been with The Atwood Machine Company for the last sixteen years in various capacities, and for the last year as assistant sales manager, has tendered his resignation to become effective August 31. Mr. Morton's plans for the future have not been announced.

Service Organization Formed

Textile Secretarial Service, Johnston Bldg., Charlotte, N. C., was recently established to provide secretarial, stenographic and mailing facilities for sales representatives and others who do not maintain their own offices in Charlotte.

Another Representative for Tilton Textile Belts

The Arthur S. Brown Co., Tilton, N. H., manufacturer of Tilton cone belts and card bands, has recently appointed W. P. Russell of Atlanta, Ga., as representative for Georgia, Alabama and Tennessee.

G. Y. Frankle Joins Swann Organization

Theodore Swann, president of The Swann Corp., has announced the appointment of George Y. Frankle as sales manager of Swann Chemical Co. He will succeed Robert S. Weatherly, who has been made vice-president. Mr. Frankle was with the Grasselli Chemical Co. for seventeen years. Mr. Weatherly has been with the Swann organization since 1923, holding the position of sales manager since 1928.

Allis-Chalmers Acquires Brown Boveri and Condit

Announcement is made by the Allis-Chalmers Mfg. Co. of Milwaukee, Wis., of the acquisition of the principal assets of the American Brown Boveri Co., Inc., and the capital stock of Condit Electrical Mfg. Corp., of Boston, Mass. After completing the manufacture of goods on order at Camden, N. J., the operations now carried on by the American Brown Boveri Co., Inc., will be segregated: the large apparatus departments and work, with substantially the same personnel, being transferred to the Allis-Chalmers' plants at Milwaukee and Pittsburgh, and the remainder moved to the plant of the Condit Electrical Mfg. Corp. at Boston, Mass. The corporate entity, the organization, plant and product of the Condit Electrical Mfg. Corp. of Boston, for thirty-one years manufacturers of oil circuit breakers, will be retained as at present.

R. S. Clemmons Now at Ring Traveler Atlanta Office

Roy S. Clemmons, for the last several years connected with the Charlotte offices of the National Ring Traveler Co., was recently transferred to Atlanta, with headquarters at 926 West Peachtree Street, to take charge of the Georgia territory.

Changes in Sturtevant Personnel

The B. F. Sturtevant Co., Boston, Mass., manufacturers of fans and blowers, have announced the following changes in personnel: Walter L. Hunken has been appointed manager of the Greensboro, N. C. office; Philip Cohen has been appointed acting manager of the Cleveland office; F. A. Engdahl has been appointed manager of the Seattle office.

Visits New England Textile Plants

LeRoy Kennette, Mooresville, S. C., representative of the Roessler & Hasslacher Chemical Co., Inc., Niagara Falls, N. Y., for the States of North Carolina, South Carolina and Virginia, has just returned from a ten days' visit in New England. While there he visited a number of textile mills and bleacheries.

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Obituary

Frost Torrence

Frost Torrence, president and treasurer, Ozark Mills, Gastonia, N. C., and president of the Colonial Processing Co., Pawtucket, R. I., died at his home in Gastonia July 31 following a brief illness. Two weeks prior to his death Mr. Torrence was confined to his bed upon the advice of physicians and several days later he suffered an acute attack of uremic poisoning which was the direct cause of his death. Mr. Torrence was born on Feb. 14, 1868, in the Crowders Creek section, south of Gastonia, and was the son of the late Dr. W. J. and Isabella Falls Torrence. He came to Gastonia in 1886 and entered the drug business. He was first identified with the textile industry when, in 1905, he purchased the Avon Mill. Some years later he sold the Avon Mill and purchased the Ozark Mills from the late Wiley T. Rankin. He is survived by his widow, five children and two sisters.

John Warren Moulton

John Warren Moulton, treasurer of J. W. Moulton & Son, Inc., Athol, Mass., and former president of the Moulton Mfg. Co., Rutland, Mass., died at his home in Holden, Mass., on July 31, aged 65 years. He was born in Rutland and was engaged as a satinet manufacturer there until several years ago when his property was taken by the state for water purposes. He then established the present business with his son in Athol. He leaves a widow and several children.

W. B. Bruton

W. B. Bruton, formerly superintendent of the Gibson plant of Cannon Mills Co., Concord, N. C., died from self-inflicted gun wounds at his home July 28. His act was attributed to poor health which forced him to retire from active work several months ago. He was superintendent of the Gibson plant for about 20 years.

Benjamin Bailey

Benjamin Bailey, Cedar Brook, N. J., died Monday, July 27, in a hospital at Wildwood, N. J., following an auto accident outside of Stone Harbor, N. J. Mr. Bailey was 52 years old. He was the proprietor of the business founded by his late father, Frank Bailey, handling dye sticks, trucks and dyehouse supplies. He is survived by his widow and two sons.

G. B. Hinman

George Burch Hinman died at the Greensboro, N. C., hospital following a serious operation July 24, at the age of 74. Mr. Hinman, a native of England, was a retired engineer and capitalist. He built many cotton mills in the South.